

**Big Rocks Wilderness  
and  
Mount Irish Wilderness  
and  
South Pahroc Range Wilderness**

**Draft  
Wilderness Management Plan  
And  
Environmental Assessment**



*Wilderness Visitors enjoying Rock Art*

**March 12, 2007**

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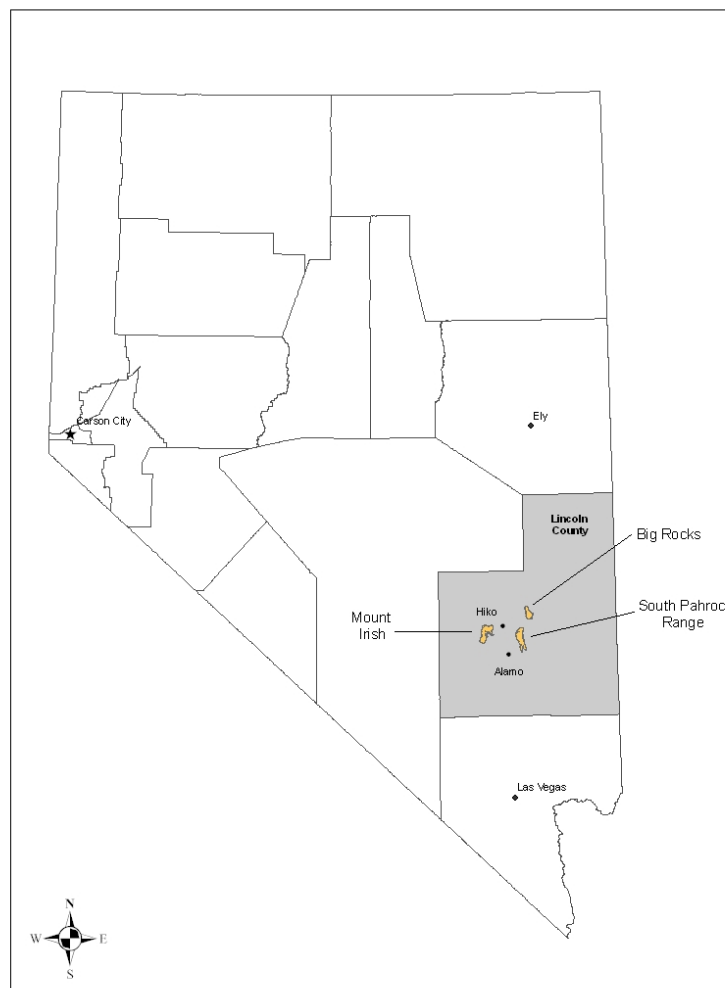
# Wilderness Management Plan

## Introduction

### Scope of the Wilderness Management Plan

This plan provides the primary management guidance for the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas. This plan also addresses some actions immediately adjacent to the wilderness areas including access to wilderness boundaries and information provided to the public. While no buffer zones are created around wilderness to protect them from the influence of activities on adjacent land, the impacts of any proposed activities on adjacent lands to the wilderness resource must be addressed in an environmental assessment. Due to their proximity and similar management issues, these three wilderness areas are being addressed in a single management plan. The plan addresses management over the next ten years.

**WMP Map 1. Overview of Wilderness Areas**



## The plan

- Preserves the areas' wilderness characteristics cumulatively identified by the Wilderness Act of 1964 as untrammeled quality, outstanding opportunities for solitude or a primitive, unconfined form of recreation, undeveloped character, naturalness and primeval character, and may also include ecological, geological, or other features of scientific, educational, scenic, or historical values.
- Identifies the conditions and opportunities for which the wilderness areas would be managed;
- Creates specific guidance for managing the resources and activities existing in the wilderness; and
- Identifies management needs outside and immediately adjacent to the wilderness areas such as signing, staging areas, and access points.

The first part of the Wilderness Management Plan is a comprehensive description of the wilderness areas and proposed management. The second part is an Environmental Assessment (EA) which fully describes and analyzes the potential impacts of the proposed management and other alternatives considered.

This plan is in conformance with the Lincoln County Conservation, Recreation, and Development Act of 2004, the Wilderness Act of 1964, Grazing Guidelines (House Report No. 101-405, Appendix B), and Wildlife Management Guidelines (House Report No. 101-405, Appendix B). The plan is also in conformance with Code of Federal Regulations 43 Part 6300, BLM Manuals 8560 (Management of Designated Wilderness Areas) and 8561 (Wilderness Management Plans), the Caliente Management Framework Plan (USDOI 198), the Caliente Management Framework Plan Amendment for the Management of Desert Tortoise Habitat (USDOI 2000), and the Nevada Department of Wildlife (BLM MOU 6300-NV930-0402, December, 2003).

This plan is not consistent with the Lincoln County Public Land and Natural Resource Management Plan of 1997 which states, "No additional wilderness areas shall be designated in Lincoln County."

## Wilderness Overview

The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas were added to the National Wilderness Preservation System by the Lincoln County Conservation, Recreation, and Development Act of 2004 (Public Law 108-424 November 30, 2004). The Big Rocks Wilderness is approximately 12,997 acres. The Mount Irish Wilderness is approximately 28,334 acres. The South Pahroc Range Wilderness is approximately 25,800 acres. These three wilderness areas are managed entirely by the Bureau of Land Management, Ely Field Office. No private in-holdings are present, though several

private parcels are located in proximity to the Big Rocks and Mount Irish Wilderness Areas.

These three wilderness areas are located in close proximity to one another and are approximately 25 miles west of Caliente in Lincoln County, Nevada. The elevations in these wilderness areas range from 4,000 to 8,000 feet.

Predominant vegetation communities across the three wilderness areas include Great Basin pinyon-juniper woodlands, Great Basin xeric mixed sagebrush shrubland, and Intermountain Basins big sagebrush shrublands. These communities are composed primarily of single leaf pinyon pine, Utah juniper with an understory of mixed sagebrush and perennial bunch grasses. Large areas of mature big sagebrush are mixed with black sagebrush, low sage, shadscale, ephedra, and rubber rabbit brush with a sparse understory of perennial bunch grasses and forbs such as Indian ricegrass and desert needlegrass. All three wilderness areas have widespread occurrences of the invasive annuals cheat grass and red brome.

The remote location, steep terrain, varied vegetation and springs near the South Pahroc Range and Big Rocks Wilderness Areas support a variety of wildlife including desert bighorn sheep. The mountain range and canyons of the Mount Irish Wilderness project out into the long sloping bajadas providing important habitat for desert bighorn sheep and pronghorn antelope. No specific wildlife species inventories have been completed for these three areas. Desert Tortoises have been sited near the South Pahroc Range Wilderness. There are no documented threatened and endangered species occurring in these areas, and no known BLM sensitive species occur in these areas.

No important wildlife use areas are known to occur in these areas. The Big Rocks, Mount Irish, and South Pahroc Range Wilderness Areas provide habitat for small mammals, including desert cottontail rabbits, black tailed jackrabbits, the desert valley kangaroo mouse as well as a variety of bat species that may roost in the rocky terrain found throughout the three areas. No known bat surveys have been conducted within these areas. Mule deer can also be found in these areas. Predators such as coyotes, bobcats, and mountain lions have been sighted or have left signs of their presence.

Springs in or near the Big Rocks and South Pahroc Range Wilderness Areas are known to support Great Basin spadefoot toads and are predicted to support red-spotted toads.

Known natural perennial springs in the three areas include Little Boulder Spring, Pahroc Spring, Sixmile Spring, Eightmile Spring, Reid Springs and Twin Springs. The volcanic tuff formations common in the Pahroc Range include many potholes where periodic water can be found following rain and snowstorms. There are several springs that have been developed for livestock grazing, including Twin Springs on the Eastern boundary of the South Pahroc Range. Other spring developments were excluded from the wilderness boundaries. There are no existing wildlife water developments within these wilderness areas.

Several human-caused developments and disturbances occur within the areas, including the spring development at Twin Springs, a seismic monitoring station in the southwest area of the South Pahroc Range, several miles of fence line across all three areas, and approximately 18 miles of unauthorized motorized vehicle routes.

No areas of high mineral resource potential have been identified in the wilderness areas.

### **Wilderness Characteristics**

The **Big Rocks Wilderness** lies in the southernmost portion of the North Pahroc Range. The topography of the area includes steep-sided mountains, several steep-walled canyons, and a section of large, jumbled boulders known as Mecca by the rock climbing community. Recreational opportunities include climbing, bouldering, camping, hiking, backpacking, horseback riding, heritage tourism, and hunting.



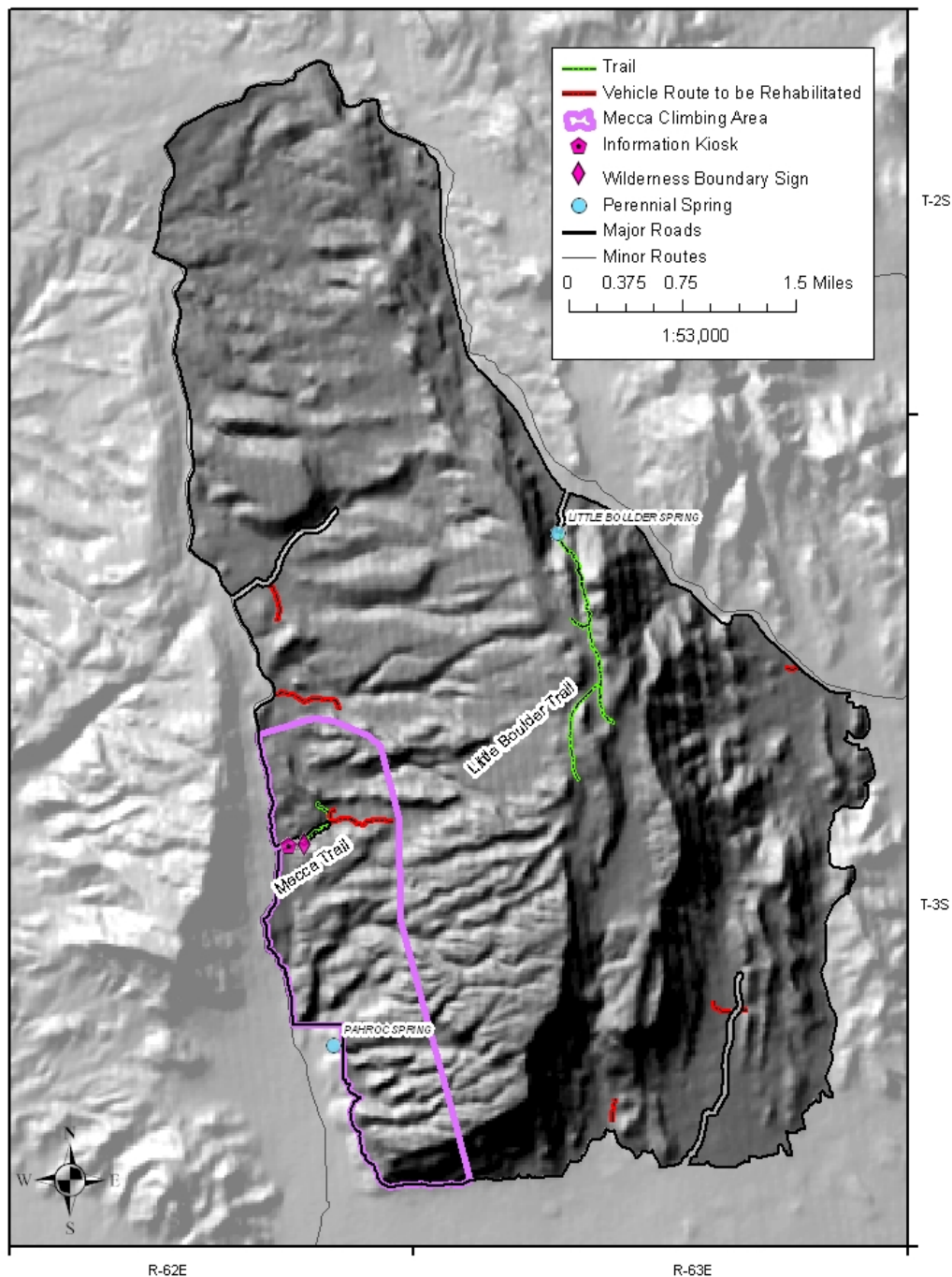
*The Big Rocks Wilderness*

The entire area provides excellent opportunities for solitude among the boulder fields, along the steep ridgeline, or within one of the canyons draining off of the mountain range. The ruggedness of the terrain prevents access by motorized vehicles and leaves the majority of the land pristine.

Vegetation ranges from desert brush and grasses at the lower elevations to pinyon and juniper stands at the middle and upper elevations. The area is composed of large boulder fields and varying colored layers of welded tuff that have weathered into unusual rock formations. Special features in this area include rock art.



**WMP Map 2. The Big Rocks Wilderness**



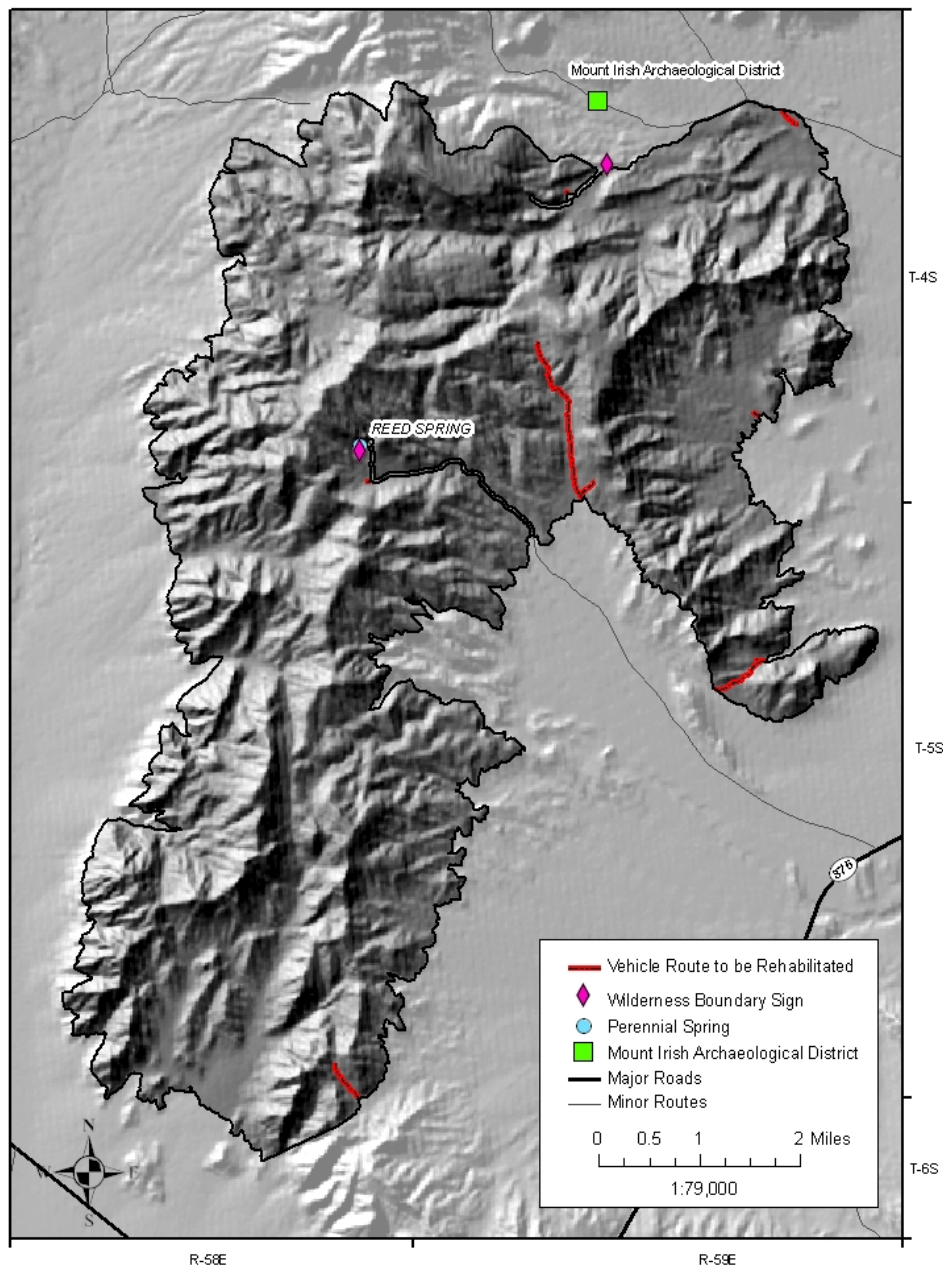
The mountain range, canyons, and sloping bajadas of the **Mount Irish Wilderness** provide important habitat for desert bighorn sheep, pronghorn and a variety of bird species. Opportunities for recreation in this area include hiking, backpacking, horseback riding, photography, heritage tourism, nature study, and hunting. The Mount Irish Archaeological District and historic Logan City are outside the northern boundary of the wilderness area, though prehistoric resources, especially rock art, occur throughout the entire region.





*The Mount Irish Wilderness*

### WMP Map 3. The Mount Irish Wilderness



The **South Pahroc Range Wilderness** is extremely rugged with deeply cut canyons, high ridges, large rounded boulders and heavily forested expanses. Much of the range is composed of varying colored layers of welded tuff that have weathered into unusual pockets, columns and stone faces. The lower elevations are gently rolling bajada with the volcanic tuff boulders more scattered. The mountain range creates an “island in the sky” effect. Moderately deep, steep-walled drainages cut across the mountain from east to

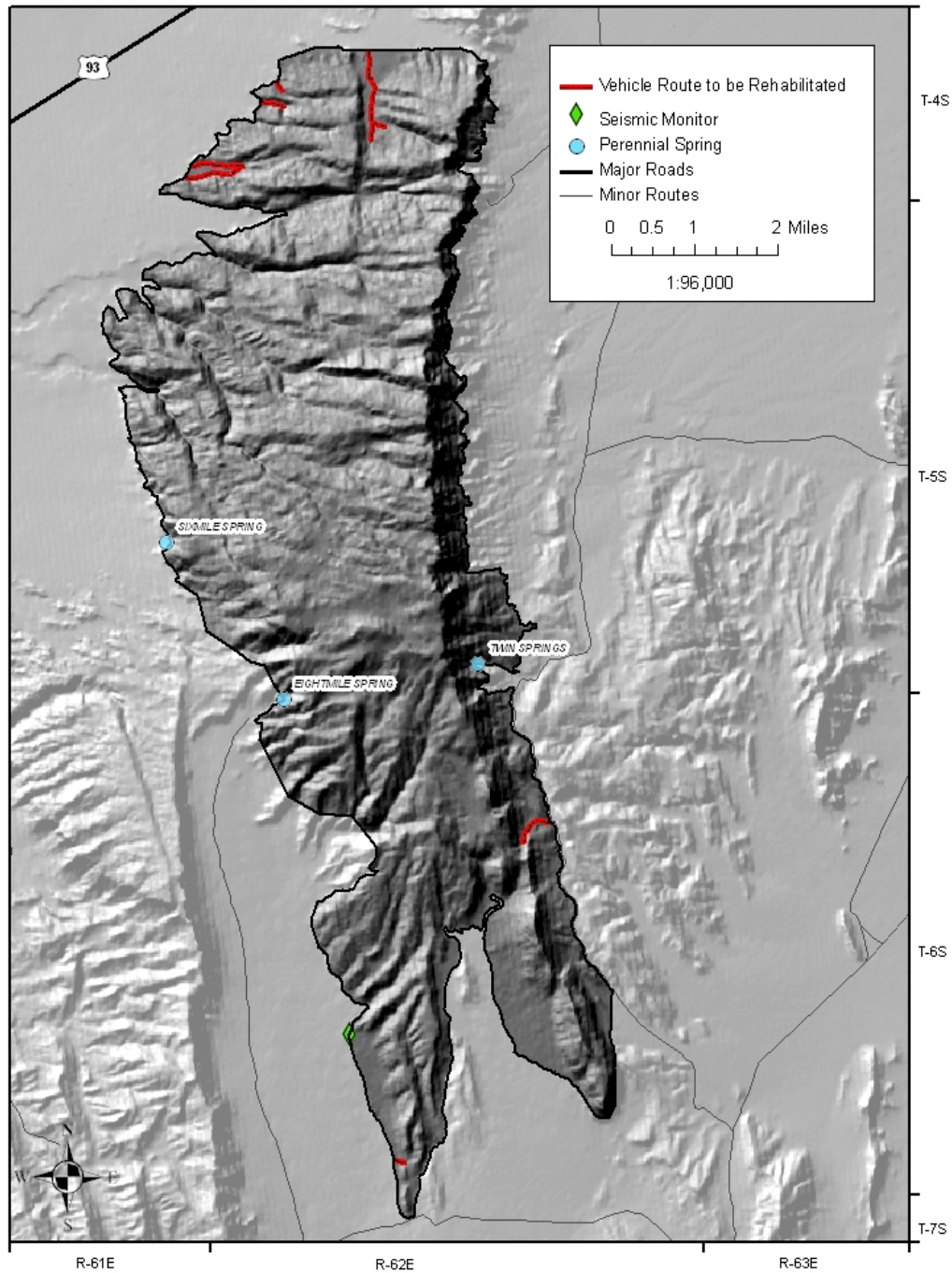
west. Differential weathering of welded tuff layers has created numerous pockets, holes, columns and the ubiquitous, large rounded boulders.



*The South Pahroc Range Wilderness*

The rugged geologic features are interlaced with stands of pinyon-juniper, white fir, aspen, and relic stands of Ponderosa Pine that form isolated glades, providing shady solitude. Mule deer, mountain lions, reintroduced bighorn sheep, golden eagles and prairie falcons can be found in the area. Opportunities for recreation include hiking, backpacking, and camping. Climbers and rock scramblers would find challenging routes that culminate in scenic overlooks atop gargantuan geologic features. Vantage points for hikers provide a view of huge, empty desert valleys, interrupted by intervening chains of more distant mountains.

**WMP Map 4. The South Pahroc Range Wilderness**



### **Wilderness-Specific Issues**

Issues to be addressed in the Wilderness Management Plan were identified through public scoping in the form of written letters and email, by BLM staff and by a Technical Review



Team set up by the Lincoln County Coordinated Resource Management Steering Committee. A Public Scoping meeting was held at the Caliente Field Station on November 9, 2005. A letter requesting public input was sent to the Ely Field Office wilderness mailing list on October 4, 2005. The Technical Review Team had meetings to generate issues on October 13, 2005 and December 8, 2005. The issues summarized below apply to all three of the wilderness areas unless specifically stated otherwise.

1. Opportunities for solitude and primitive, unconfined recreation:
  - Recreational uses including bouldering, rock climbing, heritage tourism, hunting, camping, hiking and horseback riding
  - Management of the Silver State OHV trail to prevent OHV trespass within the Big Rocks Wilderness
  - Defining maintenance levels for boundary roads and cherry stemmed vehicle access routes
  - Monitoring of visitor use levels
  - Establishment, maintenance, signing and management of designated or visitor-developed trails
  - Designation of vehicle access points
  - Maps, brochures and kiosks providing information to the public
  - Management and protection of archeological resources, especially rock art
2. Protecting and enhancing the undeveloped and natural appearance of the wilderness areas:
  - Restoration of surface disturbances, including former vehicle routes and mining disturbances
  - Removal of unnecessary facilities and trash
  - Posting wilderness boundaries
3. Preserving naturalness, primeval character and influence of the wilderness areas:
  - Trapping, transplanting and relocating wildlife
  - Management of fire
  - Emergency stabilization and rehabilitation following fire or other disturbing actions in wilderness
  - Management of exotic and invasive plant species
  - Inventory, monitoring and research of flora, fauna, paleontological and archeological resources, especially rock art
  - Management of Threatened and Endangered species, and other species of special interest or concern
4. Management of special non-wilderness land uses allowed by the Wilderness Act:
  - Management of the existing seismic monitoring station within the South Pahroc Range Wilderness
  - Access for maintenance of the power line at the southern boundary of the Mount Irish Wilderness
  - Managing access and necessary maintenance of existing authorized range facilities inside wilderness
  - Process for emergency operations, including retrieval of downed military aircraft inside wilderness

- Wildlife water developments may be considered, but only when essential to preserve the wilderness resource and to correct unnatural conditions resulting from human influence, in accordance with the Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife, Wildlife Management in Nevada BLM Wilderness Areas
  - Fire plan to consider communication towers north of Mount Irish Wilderness
5. Wilderness Management:
- Using monitoring to adjust management actions

Some issues identified during public scoping are already addressed in existing planning documents or policy, and are out of the scope of this plan. These are listed below:

- Opening closed routes in wilderness to motorized travel
- Managing airspace above wilderness
- Amending wilderness boundaries
- Use of volunteers in the monitoring of wilderness

## **Wilderness Management Goals and Objectives**

### **Goal 1:**

To provide for the long-term protection and preservation of the areas' wilderness character under a principle of non-degradation. The areas' natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation and any ecological, geological, or other features of scientific, educational, scenic or historical value present would be managed so that they would remain unimpaired.

### **Objectives:**

- Preserve the primeval character and influence of the wilderness areas by reducing non-native plants in favor of native plants
- Manage for healthy, viable, and naturally-distributed wildlife populations with the least amount of action necessary
- Preserve the primeval character and influence of the wilderness, allow fire as a natural process to create disturbance followed by natural succession in the wilderness where fire is a natural effect in the ecosystem
- Prevent fire where fire is not a natural effect in the ecosystem or where human life or property is threatened
- Protect and preserve the outstanding archeological and historic resources of these areas while allowing for visitor enjoyment of those resources



**Goal 2:**

To manage the wilderness areas for the use and enjoyment of visitors in a manner that would leave the areas unimpaired for future use and enjoyment as wilderness. The wilderness resource would be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use.

**Objectives:**

- Provide outstanding opportunities for primitive recreation with minimal on-the-ground developments
- Maintain existing opportunities for solitude by managing visitor use patterns if monitoring indicates a need
- Provide for the use and enjoyment of the wilderness in such a way that protects natural conditions through minimal regulation of visitor activities
- Provide for vehicle access to the boundaries of the wilderness areas while also deterring vehicles from entering into the wilderness areas
- Emphasize education and interpretation to manage visitor activities over regulations

**Goal 3:**

To manage the wilderness areas using the minimum tool, equipment, or structure necessary to successfully, safely and economically accomplish the objective. The chosen tool, equipment or structure should be the one that least degrades wilderness values temporarily or permanently. Management would seek to preserve spontaneity of use and as much freedom from regulation as possible.

**Objectives:**

- Implement proposed actions as necessary to meet minimum requirements for the administration of the areas as wilderness and to have the least impact to wilderness characteristics

**Goal 4:**

To manage non-conforming but accepted uses permitted by the Wilderness Act and subsequent laws in a manner that would prevent unnecessary or undue degradation of the areas' wilderness character. Non-conforming uses are the exception rather than the rule; therefore, emphasis is placed on maintaining wilderness character.

**Objectives:**

- Allow for special provision land uses provided by the Wilderness Act or Lincoln County Conservation, Recreation and Development Act while minimizing developments, degradation to naturalness and other impacts to wilderness resources

- Maintain or enhance the natural appearance of the wilderness areas by removing unnecessary facilities and minimizing or rehabilitating human-caused surface disturbances

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## **Current Situation and Assumptions**

In order to appropriately develop management actions necessary to meet the above plan objectives, the current situation and assumptions of changes expected to occur during the ten year life of the plan are considered first. Inventory, monitoring and research would be an important aspect to meet the objectives of the plan.

### ***1. Current Situation***

- Recreational visitor use of these wilderness areas is minimal and concentrated primarily around two locations: the Mecca bouldering area located in the Big Rocks Wilderness and the Mount Irish Archaeological District, on the north side of the Mount Irish Wilderness.

### ***Assumption***

- Recreational visitor use of the wilderness areas is likely to increase somewhat over the life of this plan. It is likely that recreation would require increased management to preserve the opportunities for solitude and for the future use and enjoyment of these wilderness areas.

### ***Rationale for Assumption***

- The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas are within 100 miles of Las Vegas. In addition, these areas are within 50 miles of proposed residential developments at Coyote Springs on the Clark County - Lincoln County line. The Mecca bouldering area within and adjacent to the Big Rocks Wilderness and the Mount Irish Archeological District are likely to continue to be the most commonly visited points for these wilderness areas.
- Use of the designated Silver State OHV Trail is likely to increase and require additional management to prevent OHV trespasses within the Big Rocks Wilderness.
- There is likely to be an increase in demand for public information about these wilderness areas in the form of website pages, maps, brochures, signs and guidebooks.
- It is likely that recreational activities would continue to be heritage tourism, rock climbing, bouldering, hiking, hunting, trapping and horseback riding. There is the possibility that new recreational pursuits may require additional management actions to preserve wilderness characteristics.

### ***2. Current Situation***

- All three areas are known to have extensive prehistoric archeological resources that are a prime attraction to the recreating public. There are several known occurrences of unauthorized digging occurring in and adjacent to the Big Rocks and Mount Irish Wilderness Areas.

***Assumption***

- As visitation increases, and the demand for illegally collected artifacts continues, it is likely that vandalism and theft of prehistoric resources would occur inside wilderness as well as in adjacent access zones.

***Rationale for Assumption***

- Growing public awareness of these areas and the cultural resources in them could lead to increased impacts to those resources.

***3. Current Situation***

- There are minimal surface disturbances and permanent facilities existing inside all three wilderness areas. Existing disturbances are primarily unauthorized motorized routes. Large areas of wilderness are known to have a dense cover of the invasive annual grasses red brome and cheatgrass.

***Assumption***

- Preserving the natural appearance of the wilderness areas would require some limited management.

***Rationale for Assumption***

- The continued growth in demand for motorized recreation opportunities may result in additional surface disturbances within the wilderness boundaries.
- Existing and potential future surface disturbances would likely require some work to remove or reclaim them.

***4. Current Situation***

- Livestock grazing occurs in all three wilderness areas.

***Assumption***

- Livestock grazing is compatible with the wilderness designation. Wilderness would not preclude livestock grazing from continuing over the life of this plan.

***Rationale for Assumption***

- Management of livestock grazing within wilderness is addressed in the Congressional Grazing Guidelines House Report 101-405, Appendix B.

## Management Strategy

The management strategy is based on the wilderness management objectives and the current situation and assumptions. The strategy for the Big Rocks, Mount Irish, and South Pahroc Range Wilderness Areas is to maintain or improve the natural, near-pristine conditions present today while rehabilitating existing and future disturbances.

### Wilderness Management Actions

The following site-specific actions would be implemented in the Big Rocks, Mount Irish, and South Pahroc Range Wilderness Areas unless otherwise specified. These actions meet the wilderness management objectives and respond to those wilderness-specific issues which were identified through scoping. All actions are supplemental to and consistent with wilderness laws, regulations and policies, which must be further consulted in the event of future and unforeseen issues.

**Objective: Preserve the primeval character and influence of the wilderness areas by reducing non-native plants in favor of native plants.**

#### *Noxious and Invasive Weeds*

The management ideal is to sustain only native species in wilderness areas. Noxious weeds are determined by the Nevada Department of Agriculture. Monitoring for noxious weeds would occur on an annual basis. Where noxious weeds are found, emphasis would be placed on controlling small infestations, plants likely to spread and displace native plants, or plants that may disrupt ecosystem function. In addition to noxious weeds, the same strategy would be applied to the invasive annual sahara mustard. If effective control or eradication is possible, control practices would be prioritized in the following order:

- Grubbing with hand tools if plants would not re-sprout and where infestations are of a size manageable by hand crews
- Herbicides applied by backpack and pack stock equipment where grubbing is not effective
- Biological control agents approved by the Animal and Plant Health Inspection Service (APHIS) where infestations are of such size that eradication by grubbing or herbicides is not feasible
- Herbicides applied aurally or with motorized equipment where control is feasible, where control impacts are quickly and readily rehabilitated, and where the infestation is of such size that herbicide cannot be effectively applied without motorized equipment



*Tamarisk in the South Pahroc Range Wilderness*

Selection of the control method would be based on its effectiveness as determined by plant biology, the minimum tool objective and impact to the wilderness resource. If herbicides are necessary, those approved for use on BLM lands may be used according to other existing requirements. Reseeding control areas with native species would be incorporated where local seed sources are not adequate for natural recruitment.

Invasive weeds present in the three areas include the annual grasses cheatgrass and red brome. No reliable control or eradication methods have been identified for cheatgrass or red brome. If reliable methods are developed in the future, they could be considered for application in these three wilderness areas based on the minimum tool objective and impact to wilderness qualities.

**Objective: Manage for healthy, viable and naturally-distributed wildlife populations with the least amount of action necessary.**

#### ***Wildlife Management Activities***

Wildlife management activities within these designated wilderness areas would be in conformance with the Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife (BLM MOU 6300-NV930-0402), which may be found as an attachment to this planning document.





*Bighorn Sheep in the  
South Pahroc Range Wilderness*

In furtherance of the purposes and principles of the Wilderness Act, management activities to maintain or restore wildlife populations and the habitats to support such populations may be carried out within wilderness areas designated by the Lincoln County Conservation, Recreation and Development Act, including the occasional and temporary use of motorized vehicles, if such use, as determined by the Secretary of Interior, would promote healthy, viable and more naturally-distributed wildlife populations that would enhance wilderness values and accomplish those purposes with the minimum impact necessary to reasonably accomplish the task.

#### ***Wildlife Relocation***

Transplants (i.e., removal or reintroduction of wildlife species) may be permitted if necessary: 1) to perpetuate or recover a threatened or endangered species; or 2) to restore the population of indigenous species eliminated or reduced by human influence. Sites and locations outside of the wilderness areas would be utilized first, and if not available, transplants may be made to or from the wilderness areas in a manner compatible with the wilderness character of the area.

Only species whose indigenous range includes the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would be considered for relocation into the wilderness areas. When a species is in need of augmentation in the wilderness areas, and until such time as the population is thriving on its own, the BLM would consult with the Nevada Department of Wildlife in taking actions to suspend or reduce activities contributing to the condition until such time as the population is self-sustainable.

In furtherance of the values of these wilderness areas to the larger region, and when a species is sufficiently in excess of its viable population level in the wilderness areas, wildlife relocation from the wilderness areas may be approved to restore the population of the species at indigenous habitat elsewhere.

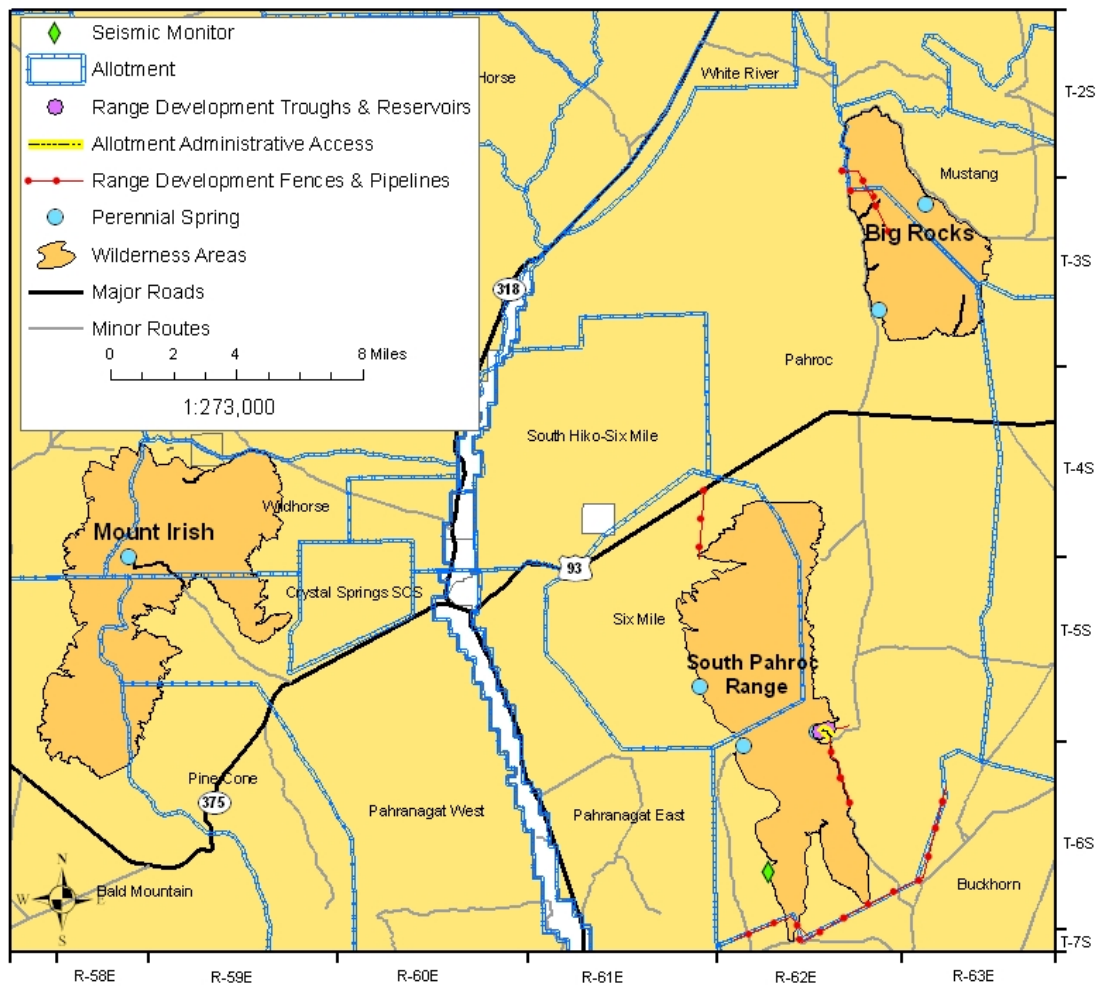
Relocation activities may be supported by motorized equipment or transport where it is necessary to meet the minimum requirements for the administration of the area as wilderness. Staging would occur outside the wilderness boundary. Timing would consider visitor use of the area and would normally be scheduled during periods when visitor use is low (for example, weekdays). In order to inform visitors of impending activity, relocation days would be posted on the BLM website two weeks in advance of activity.

### ***Wildlife Water Developments***

New water developments may be permitted only when essential to preserve the wilderness resource and when necessary to maintain the local indigenous wildlife population where human activity has caused loss of water within the local population's indigenous range, and an artificial water source cannot be located outside the wilderness areas to achieve the same purpose. Construction, maintenance and water replenishment activities may be supported by motorized equipment or transport where it is the minimum necessary for the administration of the area as wilderness. If approved, developments would be visually minimized and may not utilize trucked-in water. Inspection and maintenance of facilities would take place by non-motorized and non-mechanized means except for major maintenance requiring large parts or tools which cannot be transported by foot or pack stock.

Wildlife water developments would not be approved in the Mecca area of the Big Rocks Wilderness where bouldering is a current known use and conflicts between wildlife and bouldering may occur.

## WMP Map 5. Water Developments and Springs



**Objective:** Preserve the primeval character and influence of the wilderness, allow fire as a natural process to create disturbance followed by natural succession in the wilderness where fire is a natural effect in the ecosystem.

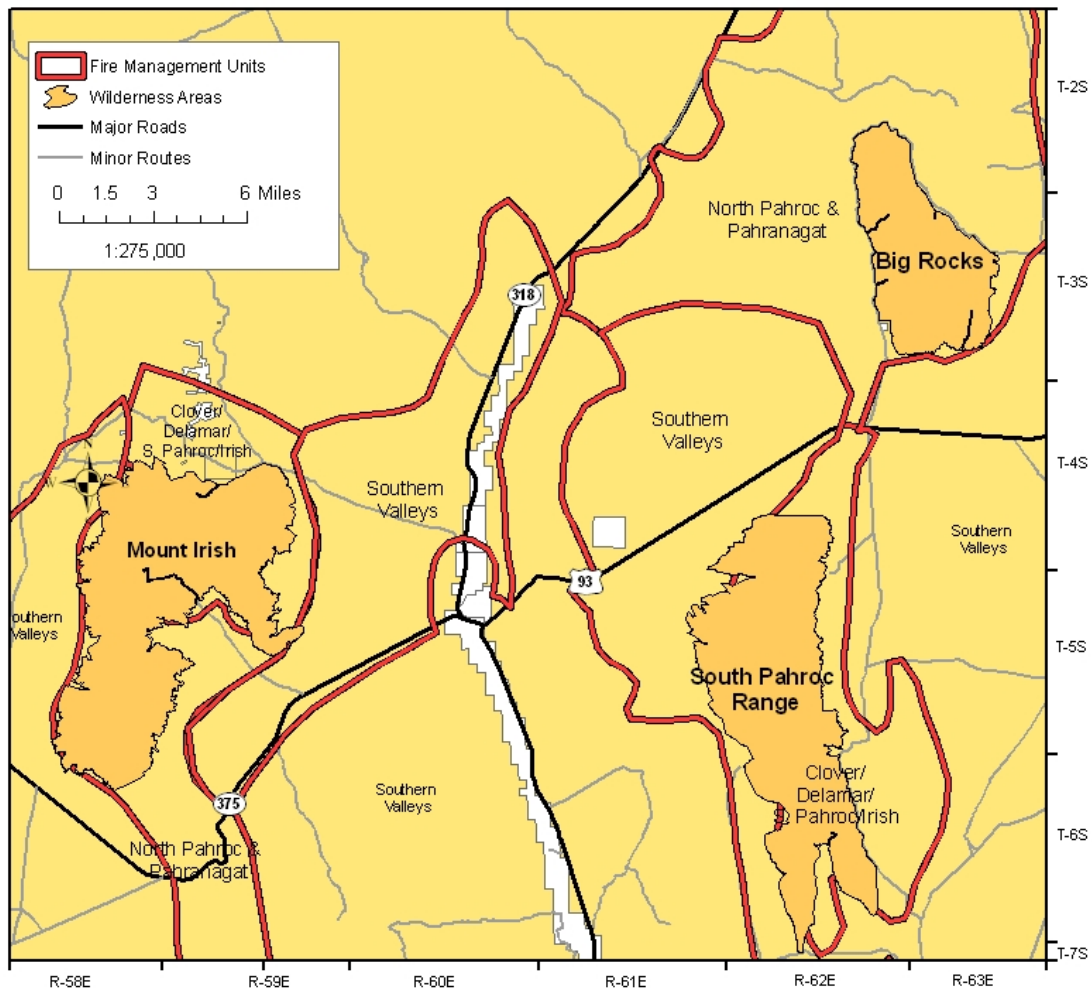
**Objective:** Prevent fire where fire is not a natural effect in the ecosystem or where human life or property is threatened.

### *Fire Management*

Fire Management in the Big Rocks Wilderness, Mount Irish Wilderness and South Pahroc Range Wilderness would be conducted in accordance with the Ely Field Office Fire Management Plan (BLM 2004). In the North Pahroc and Pahranaagat Fire Management Unit (FMU) including the Big Rocks Wilderness and the Mount Irish Wilderness, 90 percent of individual fires would be held to 300 acres or less and no more than 10,000 acres burned in a ten year period. In the Clover, Delamar, South Pahroc,

Irish FMU, including the South Pahroc Range Wilderness, 90 percent of individual fires would be held to 1,000 acres or less and no more than 50,000 acres burned in a ten year period.

**WMP Map 6. Fire Management Units**



Appropriate Management Responses (AMR) for both FMUs would be developed for all wildland fires in the planning area and would include a range of specific actions from monitoring, confinement, initial attack and suppression/extinguishment or wildfire suppression with multiple strategies. AMR would be determined for each wildland fire based on site factors, including fuel loading and fire behavior, while ensuring the safety of firefighters and the public; the protection of private property would also be considered.

Fire may be fought aggressively, but utilizing techniques that employ suppression standards necessary to stop the fire with the minimum adverse impact on wilderness characteristics. Minimum Impact Suppression Tactics (MIST) and a policy of no motor vehicles would be used unless necessary to protect human life, property or wilderness characteristics. Motorized vehicles, including earth-moving equipment and aircraft, may

be used with the Field Manager's approval to protect natural resources by stopping large, escaped fires that threaten to convert the native plant community from native vegetation to a dominance of non-native vegetation. Wildfire management priorities include maintaining native vegetation diversity by managing fire size to minimize the spread and density of annual invasive grasses, cheatgrass and red brome, and noxious weed species such as spotted knapweed, Russian knapweed, hoary cress and tamarisk, where they are known to occur.



*Burn Area in the South Pahroc Range Wilderness*

Prescribed fire may be allowed within these wilderness areas under an approved Fire Management Plan for the following purposes: 1) to reintroduce or maintain the natural condition of a fire-dependent ecosystem; 2) to restore fire where past strict fire control measures have interfered with natural ecological processes; or 3) where a primary value of these three wilderness areas would be perpetuated as a result of the burning.

Any actions deemed necessary by the Incident Commander for public and firefighter safety would be authorized.

#### ***Emergency Stabilization and Rehabilitation***

Active rehabilitation work would occur in situations necessary to stabilize soil to prevent damage to downstream human life or property, or to prevent the site from becoming dominated by non-native species. Active rehabilitation with hand tools would also occur to obscure fire lines with rock or brush. If motorized earth-moving equipment is used to construct fire lines, the same type of equipment may be needed for rehabilitation and recontouring before the equipment is released from the fire. When active rehabilitation is determined necessary, native species should be utilized, with a preference for local genetic stock if available. Otherwise, where natural vegetation is expected to return in a reasonable time, no rehabilitation work would be done.

Should a reliable method to control or eradicate annual invasive grasses be developed, including the potential use of non-native, non-invasive vegetation, it may be applied in these wilderness areas after site-specific analysis and State Director approval.

Emergency stabilization and rehabilitation treatments would be monitored annually. All monitoring would be conducted without the use of motorized or mechanized equipment.

### ***Suppression Guidelines for Wilderness***

- A Wilderness Specialist would be dispatched to all fires occurring in or threatening a wilderness area.
- Use of any motorized equipment must be approved by the Field Manager.
- Heavy equipment (bulldozers, etc.) would only be used in wilderness if the fire is threatening human life, property or wilderness characteristics. The Field Manager must approve the use of heavy equipment in all cases.
- It is preferable to locate helibases and helispots outside wilderness boundaries. However, if helibases and helispots cannot be located outside wilderness boundaries, they may be approved within wilderness boundaries by the Field Manager. The use of helibases and helispots should meet the minimum tool objective.
- Sling loading materials into or out of wilderness using a helicopter must be approved by the Field Manager and should meet the minimum required tool objective.
- Helicopters or other aircraft may be used for aerial reconnaissance work.
- Staging areas and fire camps requiring motorized access would be located outside of wilderness unless authorized by the Field Manager.
- Staging areas and fire camps that only require non-motorized access may be located in wilderness areas if authorized by the Resource Advisor.
- The Ely Field Office Noxious Weed Prevention schedule which identifies best management practices would be utilized. Suppression resources would be inspected and washed to prevent the spread of noxious weeds. Wash-down sites would be recorded using a GPS unit if possible, and reported to the Ely Field Office Weeds Coordinator. Camps and other assembly points would not be located in noxious weed infestation areas.
- Use of retardant must be approved by the Field Manager; if retardant is not approved, water may be dropped from retardant aircraft as ordered by the Incident Commander without additional authorization required.
- All fire suppression activities in wilderness would use Minimum Impact Suppression Techniques (MIST) unless a higher degree or level of fire suppression is required.



- Leave No Trace principles would be used in wilderness areas. All evidence of human activity should be removed to the maximum extent possible.

**Objective: Protect and preserve the outstanding archeological and historic resources of these areas while allowing for visitor enjoyment of those resources.**

#### ***Archaeological Resources and Historic Properties***

For protection and enhancement of these supplemental values within the three wilderness areas, vegetation may be cut back or removed up to several feet to protect sensitive resources, such as prehistoric rock art, from wildland fire. This would be accomplished using tools such as pruning shears, pulaskis or other hand tools once annually in the spring, before fire season, and would be completed by trained cultural site stewards during routine monitoring visits.



*Rock Art in the Big Rocks Wilderness*

Every attempt would be made for protection of artifacts in place; if artifacts are discovered in designated trails, foot-worn hiking paths or other areas of recreational use, they may be collected after consultation with the Ely Field Office Archaeologist and Wilderness Planner.

A reconnaissance inventory for archeological resources would be completed at spring sites in proximity to or within the wilderness areas, along access routes and cherry stemmed routes to aid in management decisions for the protection of these resources.

**Objective: Provide outstanding opportunities for primitive recreation with minimal on-the-ground developments.**

#### ***Trails***

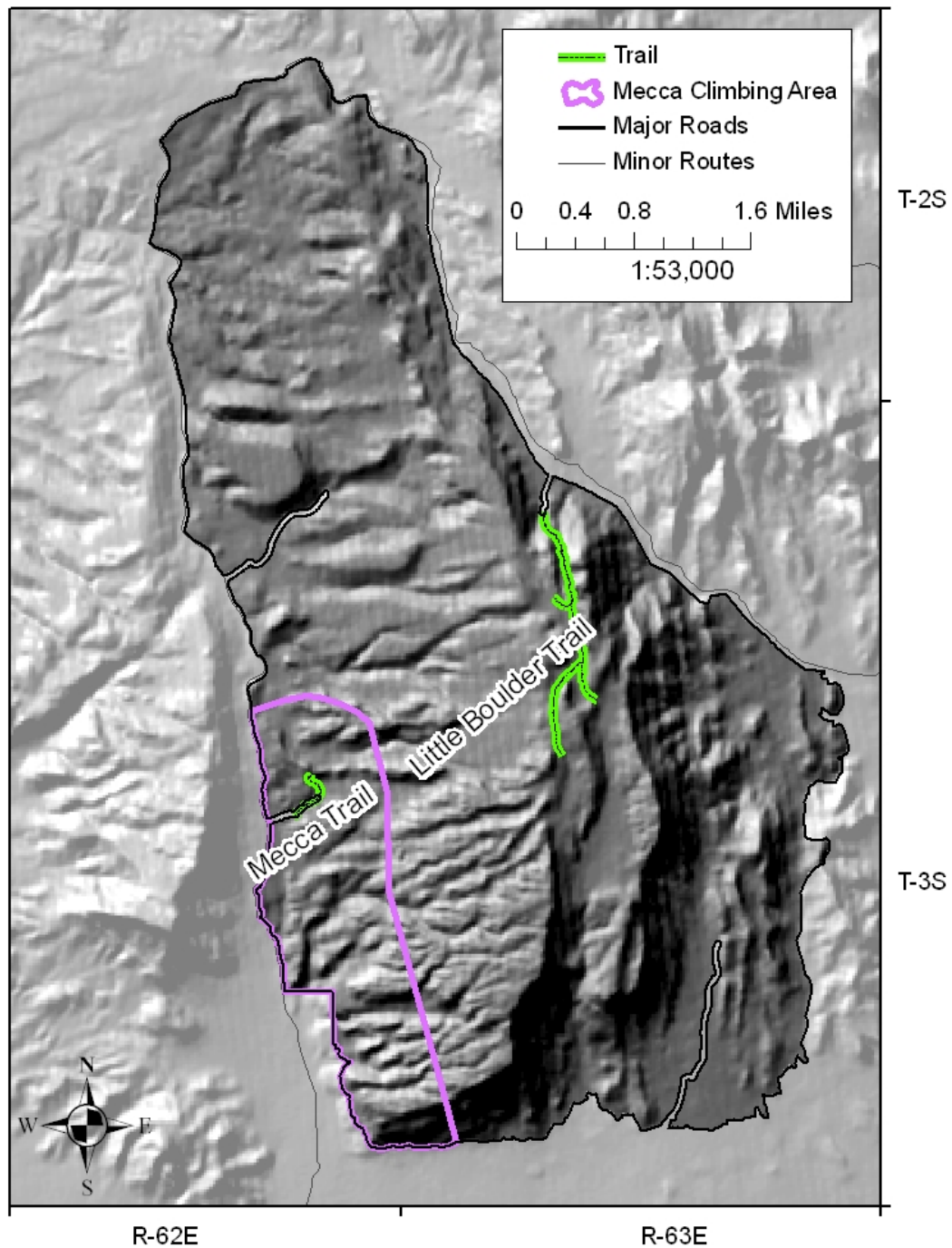
The following existing trails would be designated and converted to hiking and equestrian trails and displayed on BLM maps: in the Big Rocks Wilderness, 1) the Mecca Trail; and 2) the Little Boulder Trail.



*Little Boulder Trail*

Designated trails would be regularly maintained by the BLM and displayed on BLM maps, brochures and the Ely Field Office website. No other trails would be constructed or designated within the three wilderness areas. If not designated as a trail, or retained as a foot-worn hiking path, any new trails would be rehabilitated.

**WMP Map 7. Trails in the Big Rocks Wilderness**



These two designated trails would total approximately 2.5 miles in the Big Rocks Wilderness. A cultural inventory would be completed along these trails. The Mecca Trail is approximately 0.5 miles in length and is the main access into the Big Rocks boulder fields within the designated wilderness. The Mecca Trail is currently a two-track

route that turns into a single-track hiking trail; it would be converted to a single-track trail along its entire length. The Little Boulder Trail is an existing single-track trail that begins at Little Boulder Spring and accesses the higher plateau of the wilderness. The Little Boulder Trail would require a short reroute of approximately 0.75 miles to minimize impacts to grazing operations and wildlife use of water associated with Little Boulder Spring.



*Little Boulder Spring*

The trail reroute would leave from below the existing corral outside the wilderness and follow the wash to the intersection with the existing trail. These trails would not be marked on the ground, but would be indicated on BLM maps. Foot-worn hiking paths may occur and may be available for use upon discovery by visitors. These informal paths would not be marked on the ground, displayed on BLM maps or brochures, or normally receive maintenance.

No known foot-worn hiking paths exist within the three wilderness areas. Monitoring for new foot-worn hiking paths would specifically occur in the Mecca area of the Big Rocks Wilderness, the southern drainage of the South Pahroc Range Wilderness, all vehicle access points and those 6.5 miles of unauthorized motorized routes closed at the time of wilderness designation. An inventory of new foot-worn hiking paths would be maintained and monitored for resource damage. Monitoring would identify paths with different levels of trampling, leading to primitive camping areas, cut vegetation or other evidence of use (see the Monitoring section at the end of the Management Strategy).

As new foot-worn paths are discovered, they would be evaluated for impacts to wilderness character (including natural and cultural resources) and the management objectives of this plan. When appropriate and where possible, new foot-worn hiking paths may be rehabilitated (see guidelines for rehabilitation of disturbances later in this section) or retained. When a foot-worn hiking path is retained, it may be rerouted, improved or maintained to follow designated trail guidelines to make the trail compatible with protecting resources, while preserving the wilderness character of the area.

Both designated trails and, when determined appropriate, informal foot-worn paths may be maintained or rerouted where they are causing or anticipated to cause damage to

wilderness character. Examples for when trail maintenance or rerouting would occur include:

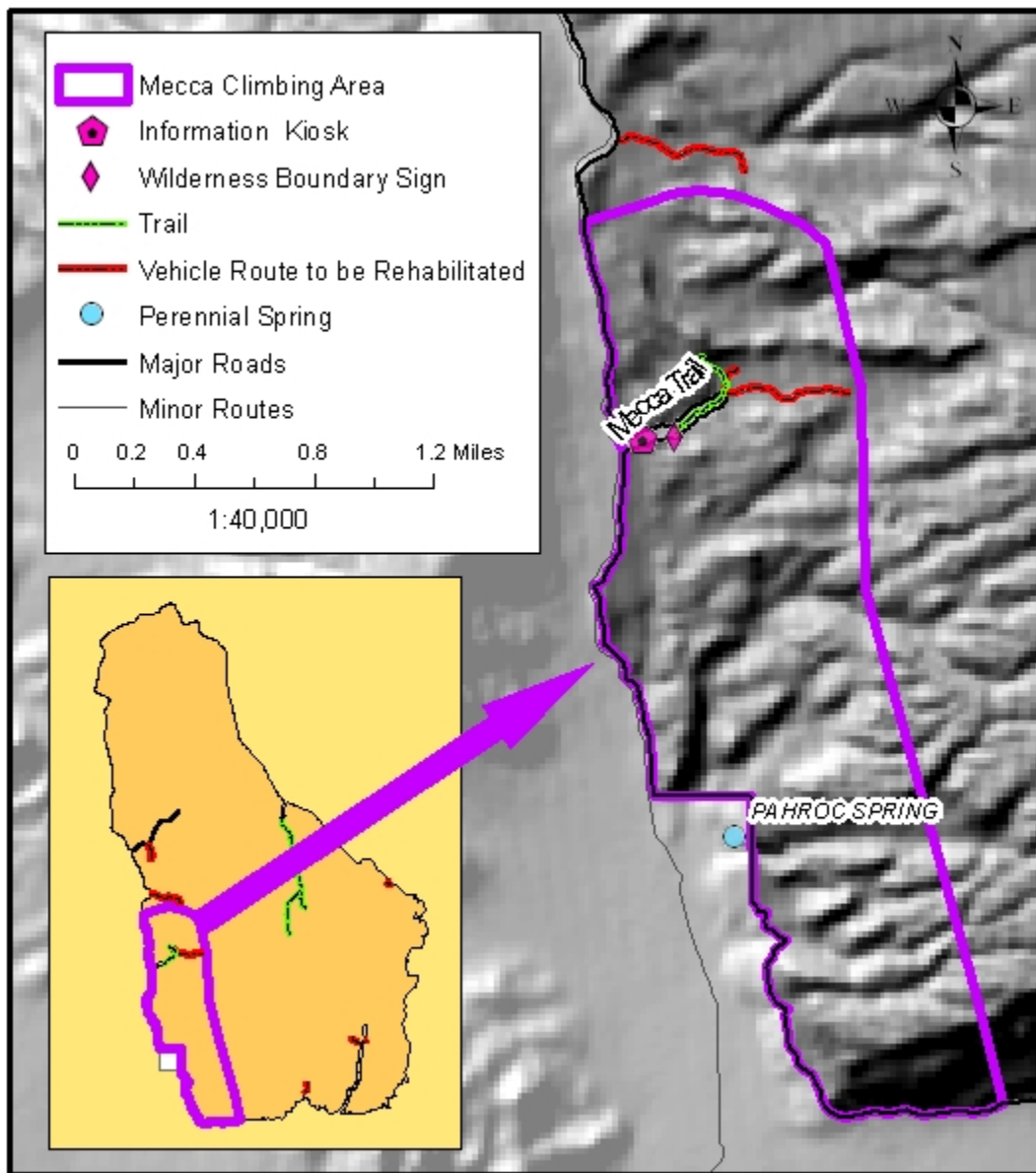
- Slopes greater than 15 percent, beyond which potential for excessive soil erosion and trail deterioration is high. Very short, steep sections may be retained where reinforcement with native rock would prevent soil erosion. Rolling dips or rock-enforced water bars would be utilized to reduce water-caused soil erosion.
- Where trail braiding or duplicate routes exist or are beginning to occur, the most appropriate trail would be selected and the duplicate route(s) blocked, barricaded or otherwise rehabilitated with rock or native vegetation.
- Trails would be limited to a width of 24 inches, not to exceed 36 inches except trail sections along precipices (where it may be wider for safety) or in washes. Tree limbs or fallen trees may be cleared within ten feet high and four feet to either side of the trail (cutting limbs at trunk) or, where practical, minor trail relocation may be done to avoid the tree.
- Trails may be rerouted to avoid damage to natural or cultural resources.

***Manage Bouldering (climbing on small rock formations)***

Bouldering would be permitted in these wilderness areas, and for the most part, is likely to occur only in the Mecca area of the Big Rocks Wilderness.



**WMP Map 8. The Mecca Climbing Area**



Damaging practices, including chiseling or chipping rock, forcibly prying off rock, gluing or otherwise affixing artificial holds on rock and destroying vegetation to enhance a route, would be prohibited. These prohibitions would be indicated on information kiosks for the area, BLM brochures and on the BLM website. Climbing directly on, above or adjacent to rock art panels would also be prohibited; this restriction would be in accordance with the Archaeological Resources Protection Act of 1979, which states that “no person may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands” (Section 6(a)).



It is likely that some foot-worn hiking paths connecting various boulders and other climbing-related surface disturbances would occur. This area would be specifically monitored for new foot-worn paths, disturbances and subsequent resource impacts. Foot-worn paths resulting from bouldering activities would be managed according to the above discussion. In addition, there is increased potential for trampling of soil and vegetation around boulders and staging areas. A staging area would be designated outside the Big Rocks Wilderness as described later.

Bouldering and climbing activities, such as the use of chalk, may be limited in smaller areas for the protection and preservation of archaeological and historic resources.



*Bouldering in Mecca*

### ***Manage General Recreation Activities***

A variety of recreation activities are likely to occur in all three wilderness areas. Management actions that may be initiated at signs of recreational impacts include, but are not limited to:

- Public outreach and education in Leave No Trace principles to encourage minimum impact practices
- Provide information to the public on non-wilderness recreational opportunities in the region
- Establishment of a protective area around sensitive resources where recreation activities may be restricted
- Closure of areas to recreation activities

Hunting and trapping is permitted in the three wilderness areas subject to applicable State and Federal laws and regulations.

Recreational horseback riding and use of pack stock animals would be permitted in these three wilderness areas both on and off trail. Other than incidental browsing, riding and pack stock animals may only be fed with packed-in, certified weed-free feed.

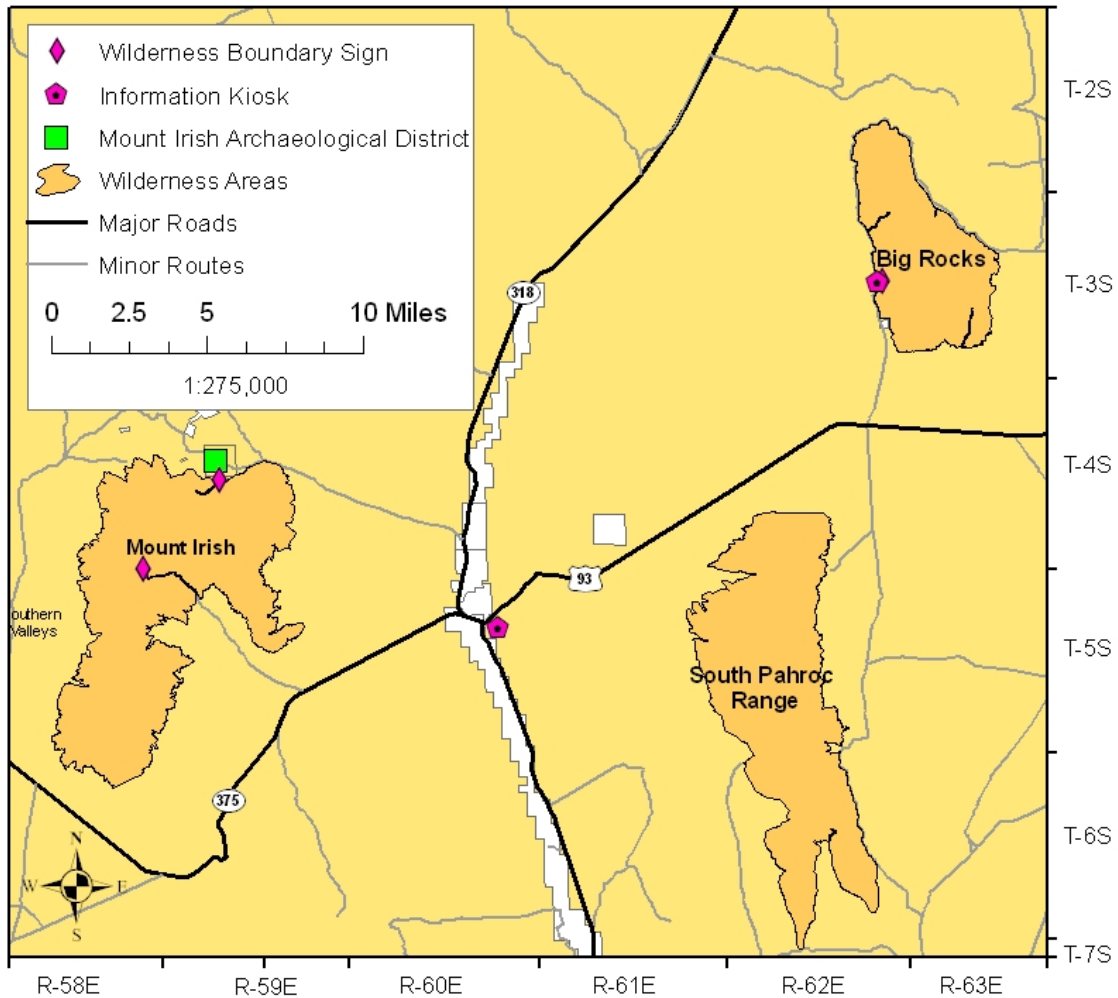
### ***Camping***

Backcountry camping would be allowed. Occupying a campsite would be allowed for up to 14 days. Should a visitor wish to camp longer than 14 days, their camp must be relocated a minimum of 25 miles from the previous site. If monitoring shows that the 14-day stay limit is leading to unacceptable resource impacts, site stay limits of less than 14 days could be implemented. Campfires would be allowed except under fire hazard restrictions. Visitors would be allowed to collect dead and down fuelwood for personal campfires during their trip. Leave No Trace camping techniques would be encouraged through literature, BLM-sponsored Leave No Trace Trainer courses and public workshops. If more than two campsites (identified by the presence of a campfire rock ring) are identified within a quarter mile of each other, the least impacted site would be restored to a natural condition to minimize additional camping disturbance. Campfire rings closer than 300 feet to sole water sources, in compliance with state regulations, would also be removed.

### ***Signs***

Wilderness boundaries would be identified by wilderness signs at key locations. Wilderness boundary signs at access points may be larger signs with the name of the wilderness. These larger signs would be placed specifically at the Mecca Trailhead to the Big Rocks Wilderness boundary, at the North access point of the Mount Irish Wilderness near the Archaeological District and the Logan Site, and at the Reed Spring access point in the Mount Irish Wilderness. These signboards would provide wilderness, natural and cultural resource interpretive information. Other access points may have smaller signboards to provide additional information. No directional signs would be placed for trails within wilderness.

## WMP Map 9. Boundary Signs and Informational Kiosks



An information kiosk would be placed at the Mecca staging area. A large information kiosk would be placed at the junction of Highway 93, and state routes 318 and 375, south of the community of Hiko. This kiosk would provide information on wilderness in Lincoln County and the Silver State Trail Off-Highway Vehicle Trail.

**Objective: Maintain existing opportunities for solitude by managing visitor use patterns if monitoring indicates a need.**

### *Solitude*

In the Mecca area of the Big Rocks Wilderness, encounters with other groups more than 0.5 mile inside the wilderness boundary would be infrequent with no more than 12 encounters per day exceeded on no more than 12 days a year.

In the remainder of the Big Rocks Wilderness and the entire Mount Irish Wilderness and South Pahroc Range Wilderness, encounters with other groups more than 0.5 mile inside

the wilderness boundaries from access points would be rare, with no more than two encounters per day exceeded on no more than four days per year.



*Sunset on the Big Rocks Wilderness*

The following management actions, listed in order of priority, may be initiated if standards as identified above are exceeded:

- Educate visitors concerning Leave No Trace recreation ethics to reduce conflict with other visitors
- Provide information to the public on non-wilderness recreational opportunities in the region
- Establish a group size limit of 12
- Increase difficulties of access (reduce maintenance levels on access points and boundary roads, limit available public information, limit parking availability, etc.)
- A combination of the above methods
- Plan revision with additional public input to reassess these standards and/or implement more direct controls

**Objective: Provide for the use and enjoyment of the wilderness in such a way that protects natural conditions through minimal regulation of visitor activities.**

Section 4(c) of the Wilderness Act prohibits commercial enterprises within wilderness. Section 4(d) allows for some commercial services to the extent necessary for activities which are proper for realizing wilderness purposes of wilderness areas.

#### ***Guides and Outfitters***

Commercial guiding would be permitted for:

- Hunting

- Academically-oriented organizations whose primary purpose is wilderness or environmental education
- Organizations whose service is primarily for the support of people with disabilities

Guides would be subject to the same camping limitation as other visitors to the wilderness areas. Limits on the number of commercial hunting guides in wilderness may be implemented if monitoring identifies excessive impacts to wilderness character or other natural or cultural resources.

### ***Commercial Pine Nut Harvest Restrictions***

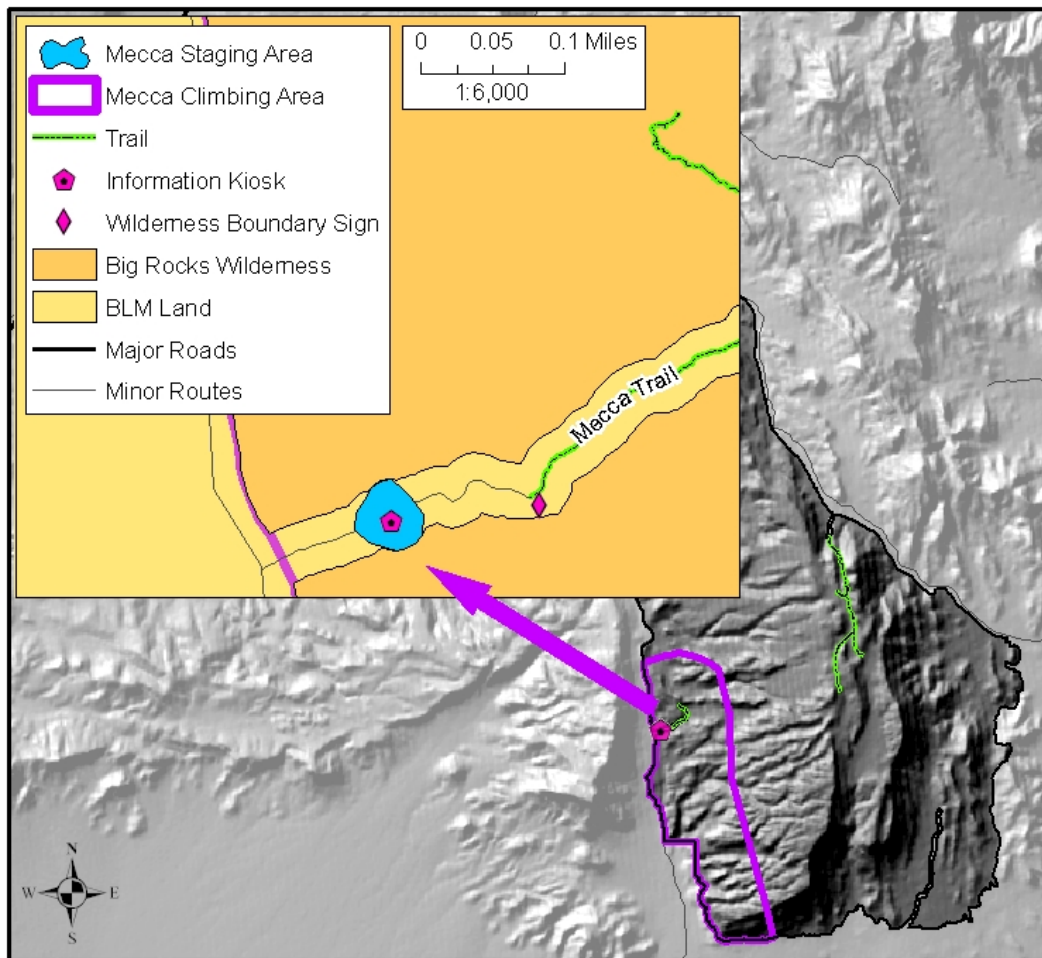
The three wilderness areas would be closed to commercial pine nut harvesting. Commercial pine nut harvest permits are not necessary for the public to enjoy the wilderness purposes of these three areas. The opportunities for commercial pine nut harvesting in non-wilderness areas remains large. Pine nut collecting for personal use within these three areas would continue to be allowed subject to land use planning decisions.

**Objective: Provide for vehicle access to the boundaries of the wilderness areas while also deterring vehicles from entering into the wilderness areas.**

### ***Vehicle Access and Staging Areas***

A staging area would be designated at the Mecca area of the Big Rocks Wilderness. This area would occur outside the wilderness, approximately 1.75 miles north of the private property at Pahroc Spring along the access route to Mecca, and would accommodate several passenger vehicles. The area of disturbance for the staging area would be no more than two acres, and would remain within the 200-foot non-wilderness corridor. The staging area would be defined by a low profile wooden rail fence and interpretive panel. A dispersed camping area occurs approximately 0.25 miles further along the route that would accommodate four additional passenger vehicles. The designated Mecca Trail continues on beyond the primitive camping area.

### WMP Map 10. The Mecca Staging Area



For the most part, visitors would access the wilderness areas in motorized and mechanized vehicles at additional points not designated as trailheads, where existing roads end at the boundary. These include five points at the Big Rocks Wilderness, eight points at the Mount Irish Wilderness and ten points at the South Pahroc Range Wilderness. Access routes would be maintained at their current condition. Wilderness access points would be defined by creating turn-arounds at suitable locations at or before wilderness boundaries to prevent vehicles from continuing into wilderness.

When a new turn-around must be created, it would occupy no more than 0.5 acres and leave adequate space for two vehicles to park parallel to the road without blocking the turn-around. Turn-arounds would not extend into the wilderness. They would be limited to the 100-foot boundary offset.

Vehicle barriers would be constructed outside the wilderness areas where natural barriers are not adequate to keep vehicles from traveling past the turn-around. Barriers would be prioritized as follows:



- Wilderness sign, berm associated with turn-around, small rocks and/or vegetation placement or restoration
- Large boulders moved by heavy equipment
- Posts
- Fence or gates

**Objective: Emphasize education and interpretation to manage visitor activities over regulations.**

### ***Environmental Education and Interpretation***

General interpretive information for natural resources, cultural resources, wilderness and recreation would be located on kiosks, maps, brochures and the BLM website. There would be no interpretive trails designated.



*Environmental Education  
in the Big Rocks Wilderness*

Public outreach for Leave No Trace recreation ethics would be emphasized with both classes and workshops presented at local schools and in the field. A separate wilderness public education plan would be developed for programs related to all designated wilderness in Lincoln County.

### ***Off-site Information***

Basic information about the wilderness areas (for example, safety, Leave No Trace, sensitive resources and some location information) would be provided in brochures, on the BLM website and on BLM Surface Management Edition maps. In addition, wilderness-specific maps would be produced with the designated trails, descriptions and interpretive information. Wilderness ethics and Leave No Trace principles would be included on maps.

The BLM would also coordinate with the U.S. Geological Survey to include wilderness boundaries on new USGS map printings, and remove from future USGS map printings vehicle routes depicted within wilderness boundaries. In addition, the BLM would work with private map producers to include wilderness boundaries, trails and staging areas.



The BLM would collaborate with other agencies and non-government organizations in the presentation of basic information on these three wilderness areas when appropriate.

Information on these wilderness areas may also be made available by non-BLM sources such as guide books.

**Objective: Implement proposed actions as necessary to meet minimum requirements for the administration of the areas as wilderness and to have the least impact to wilderness characteristics.**

### ***Research***

The three wilderness areas would be identified as priority areas for conducting basic and specific inventory, monitoring and research activities as they relate to the wilderness resource. Inventory, monitoring and research may generate the need for management action to preserve wilderness characteristics. Research on wildlife, their habitats and the recreational users of these resources is a legitimate activity in these wilderness areas when conducted in a manner compatible with the preservation of the wilderness environment. Research on archaeological resources for the preservation of these important supplemental values to wilderness is also a legitimate activity in these areas.

Research proposals that do not contribute to the improved management of the area as wilderness would not be permitted if they can be accomplished outside of the wilderness areas.

Research and other studies must be conducted without the use of motorized or mechanized equipment or construction of temporary or permanent structures. Exceptions may be approved for projects that are essential to managing the specific wilderness areas when no other feasible alternatives exist. Such use must be necessary to meet the minimum requirements for administration of the area as wilderness and must not degrade wilderness character. A site-specific NEPA analysis would have to be prepared for the authorization of any exceptions.

**Objective: Allow for special provision land uses provided by the Wilderness Act or Lincoln County Conservation, Recreation and Development Act while minimizing developments, degradation to naturalness and other impacts to wilderness resources.**

### ***Livestock Grazing***

Grazing would continue within the three wilderness areas under federal regulations to meet the Mojave – Southern Great Basin Resource Advisory Council Standards.

The seven existing range developments within the Big Rocks and South Pahroc Range Wilderness Areas would be kept and maintained. These developments would be evaluated when there is a grazing permit transfer and may be removed if deemed unnecessary by the BLM and permittee.

Routine livestock management and infrastructure inspections would be accomplished by foot or horseback as needed. Motorized vehicles may be authorized for major maintenance when transporting equipment or parts which cannot be accomplished by foot or pack stock. The Twin Springs water development in the South Pahroc Range would be the only infrastructure that may require motorized access for major maintenance. Motorized access to the Twin Springs water development may be permitted with written notification to the Field Manager. This maintenance may include the use of a four-wheel drive vehicle and backhoe for a maximum of 12 hours. The existing two-track route accessing the development would be gated outside the wilderness boundary and not rehabilitated. This would be the only route permitted for motorized or mechanized access to the Twin Springs Development.

In the case of an emergency such as rescuing sick animals or placement of feed in all three wilderness areas, the permittee is authorized to use motor vehicles. This would be stated as a term or condition of the grazing permit.

### ***Water rights***

The BLM would seek to acquire additional water rights within the wilderness areas under Nevada state water law. Existing water rights may be purchased from willing sellers or shared with other agencies through cooperative agreements. The BLM may also file application for additional water rights where water in excess of existing permitted rights can be shown to exist. Water rights would only be used to sustain riparian habitat, provide water to wildlife or support recreation.



*Unnamed Spring in the South Pahroc Range Wilderness*

### ***Mine Claims***

There are four mine claims along the eastern boundary of the South Pahroc Range Wilderness. Validity exams on identified claims would be conducted where necessary according to wilderness management regulations.

### ***Military Operations***

Proposals for training exercises by the military would not be located within the three wilderness areas. The BLM would work with military representatives to determine appropriate locations outside of wilderness for any training exercise.

In the case of a dropped object, such as live ordinance, flares, aircraft parts or downed aircraft, the following guidelines would be followed:

- A Wilderness Specialist would be dispatched to all incidents occurring in or threatening wilderness.
- Use of any motorized equipment must be approved by the Field Manager.
- Heavy equipment (bulldozers, etc.) would only be used in wilderness if the incident is threatening human life, property or wilderness characteristics. The Field Manager must approve the use of heavy equipment in all cases.
- Helibases and helispots within wilderness must be approved by the Field Manager; the use of helibases and helispots should meet the minimum required tool objective.
- Helicopters or other aircraft may be used for aerial reconnaissance work.
- Sling loading materials into or out of wilderness using a helicopter must be approved by the Field Manager and should meet the minimum required tool objective.
- Staging areas and camps requiring motorized access would be located outside of wilderness unless authorized by the Field Manager.
- Staging areas and camps that only require non-motorized access may be located in wilderness areas if authorized by the Resource Advisor.
- The Ely Field Office Noxious Weed Prevention schedule (which identifies best management practices) would be utilized. Suppression resources would be inspected and washed to prevent the spread of noxious weeds. Wash-down sites would be recorded using a GPS unit if possible and reported to the Ely Field Office Weeds Coordinator. Camps and other assembly points would not be located in noxious weed infestation areas.
- Leave No Trace principles would be used in wilderness areas. All evidence of human activity should be removed to the maximum extent possible.
- Notifications required for the above actions shall be via email/faxed memo from 99 CES/CC to the Ely Field Manager. Actions may be verbally approved with follow-up written request/approval within 72 hours.

**Objective: Maintain or enhance the natural appearance of the wilderness areas by removing unnecessary facilities and minimizing or rehabilitating human-caused surface disturbances.**

### ***Structures, Installations and Other Human Effects or Disturbances***

Structures and installations may be removed if they are not the minimum necessary for administration of the area as wilderness, or are not associated with a grandfathered use or valid existing right.

The seismic monitoring station within the South Pahroc Range Wilderness would be kept and maintained. The station was in place for over 20 years prior to the areas designation as wilderness. Access to the monitoring station would remain non-motorized and non-mechanized.



*Seismic Monitoring Station*

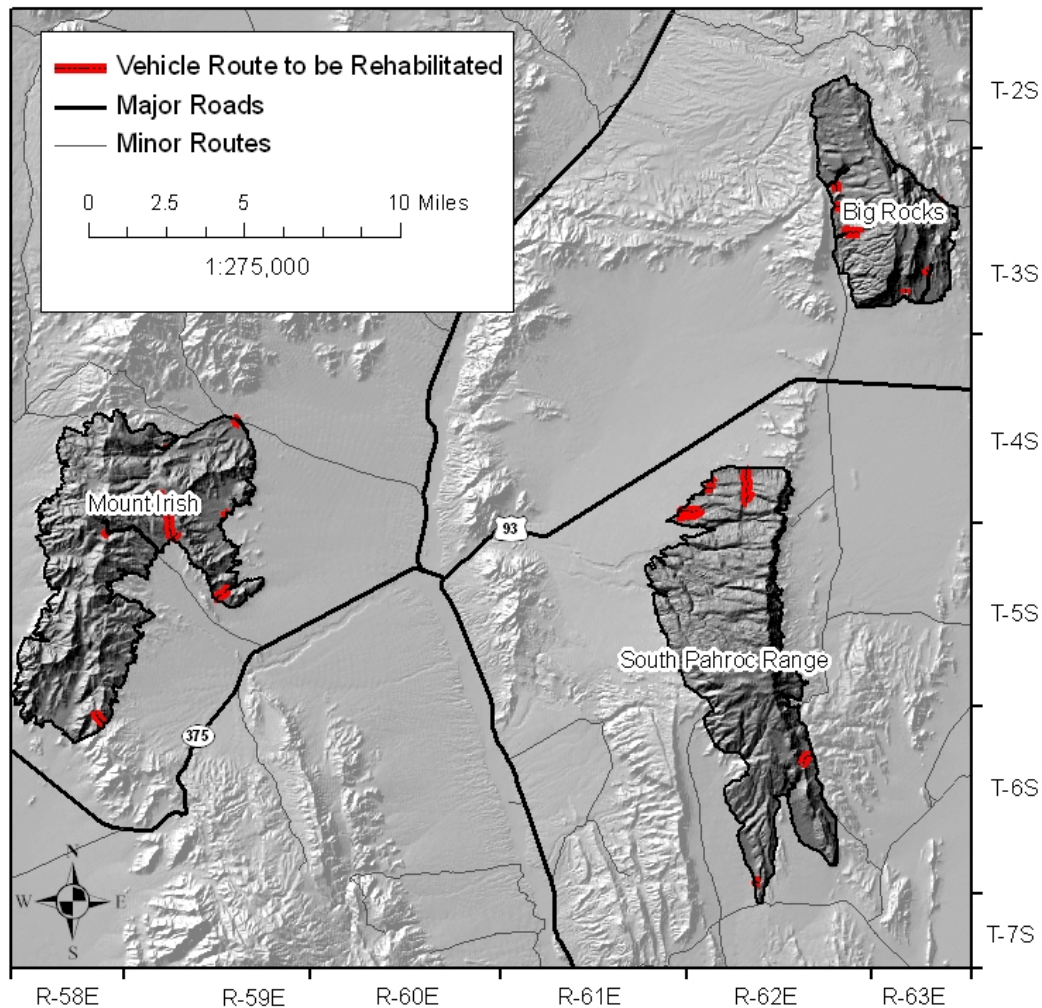
Wilderness staff and volunteer monitors would be given instructions on the identification of human effects that would be considered unattended personal property or refuse. Unattended personal property not associated with an active camp, including geocaches, would be removed by BLM personnel upon encountering it and temporarily held at the BLM Ely Field Office or Caliente Field Station. If possible, the owner of the personal property would be contacted. In the case of a geocache, the BLM would also request that the geocache or virtual geocache sponsor remove the site listing from the internet. Human effects for which questions of age exist would be photographed for further consideration by the archaeologist. Prehistoric artifacts would not be disrupted.

### ***Rehabilitation of Illegal Motorized Routes***

There are approximately 6.5 miles of unauthorized motorized vehicle routes throughout the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas that are largely denuded of vegetation, though some vegetation may occur along the center hump of the route. Soils in the routes are compacted and subject to increased erosion. These routes, as well as any future motorized trespasses, would be identified for rehabilitation using

one or a combination of the following methods: decompaction, scarifying, recontouring, vertical mulching, erosion control, permion and vegetative restoration with native species and seed mixes. These routes would be monitored for future unauthorized motorized traffic and may require repeat rehabilitation. Artificial barriers may be placed outside of wilderness boundaries for protection of rehabilitation actions, or as an alternative to unsuccessful rehabilitation measures. Placement of these barriers would occur outside of the wilderness boundaries.

**WMP Map 11. Illegal Routes to be Rehabilitated**



**Note on Map 11:** For detailed maps showing illegal routes to be rehabilitated in each individual wilderness area, please refer to Maps 2, 3 and 4 near the beginning of this Wilderness Management Plan.

Work would be completed by BLM staff and contractors with the assistance of volunteer hand crews. All actions in wilderness would be conducted with non-motorized equipment and non-mechanized transport. Actions would include and generally be conducted in the following order as needed:



**Decompaction:** Working the top few inches of the entire disturbed surface to relieve soil compaction. This action would be completed with the use of non-motorized hand tools (soil spades, spading forks, McCloud rakes, pulaskis, shovels, horse-drawn implements, etc.).

**Scarifying/Pitting:** Loosening and texturizing the impacted, disturbed surface in random locations to better capture water, organic debris and wind-blown seeds, thereby stimulating natural revegetation. This would be done with non-motorized hand tools.

**Recontouring:** Reconfiguring/shaping the route to blend it with the adjacent, relatively undisturbed desert. This would involve the creation of small hummocks and banks, where appropriate, to mimic the surrounding landscape. Berms would be pulled in and the soil distributed across the disturbed surface. Vehicle tracks in sandy washes would be raked. This would lessen visual contrasts and provide a surface for natural revegetation. This action would be completed with non-motorized hand tools.

**Vertical Mulching:** Dead and down vegetation is "planted" to obscure the visible portions of the disturbance. Additional dead vegetation, rock material and other organic matter may be distributed over the worked surface to decrease visual contrasts, create sheltered sites to aid in natural revegetation and add organic debris. Dead and down vegetation and other materials would be gathered from areas near to the disturbances by hand.

**Erosion Control:** Placing sterile weed-free straw bales or creating light terracing/berms to reduce erosion and create barriers to vehicles on steep slopes. This is especially effective on hill climbs. The straw bales break down over time and provide additional organic debris to the reclamation site. Bales would be brought in by hand or horseback to the worksite.

**Permion (desert varnish colorant):** Spraying disturbed rock surfaces to simulate the coloration of the surrounding desert varnish. Permion is a chemical compound comprised of manganese, salts and other ingredients used to simulate the natural desert varnish that occurs on rock surfaces in arid environments. Permion would be applied sparingly, with the use of a backpack sprayer, and only on disturbed rock surfaces that contrast sharply with the surrounding landscape.

**Vegetative Restoration:** This would involve planting, transplanting and/or seeding necessary to help stabilize soil, speed overall vegetative recovery and camouflage evidence of disturbances. All seed would be locally collected or native species scattered on reclaimed surfaces to accelerate natural revegetation. This action would be completed by non-motorized hand tools.



*Illegal Route in the Big Rocks Wilderness*

### ***Monitoring***

The monitoring section tracks the outcome of those proposed activities on four qualities of wilderness character, not just the quality of wilderness the activity was primarily intended to address.

Wilderness character encompasses a combination of elements as described by four principle qualities defined in the Wilderness Act. The combination of these qualities distinguishes wilderness from all other lands. These four qualities are of equal importance to one another and are defined as:

- Untrammeled – wilderness is unhindered and free from modern human control or manipulation.
- Outstanding opportunities for solitude or a primitive and unconfined type of recreation – wilderness provides opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge.
- Undeveloped – wilderness is substantially without permanent developments or modern human occupation.
- Natural – wilderness ecological systems, being affected primarily by the forces of nature, retain their primeval character and influence substantially free from the effects of modern human civilization.

A single activity is likely to have an effect on several qualities of wilderness character, even though the purpose of the activity is to affect only one quality. A single activity may improve one quality of wilderness character while diminishing another. For example, an activity such as weed control, which is intended to restore natural conditions over the long term, may diminish the untrammeled condition of the wilderness in the short term. These two separate outcomes, the effectiveness on improving “natural” and the side effect of diminishing “untrammeled,” will be monitored separately.





*The Mount Irish Wilderness*

Since activities may affect several qualities, separate activities undertaken for different purposes may cumulatively diminish one of the same qualities of wilderness character. For example, a trail might be designated to control visitor impacts on vegetation. In the same vicinity, a fence or barrier may be in place to protect sensitive resources from recreational impacts. Though the two activities are unrelated, both activities have an effect on the “undeveloped” quality of wilderness character. Monitoring the effects of single activities to multiple qualities of wilderness character will improve our understanding of the effects upon wilderness character in combination and over time.

Effects of intentional, unintentional and unauthorized activities will all be captured under the monitoring system. The monitoring program will provide a greater understanding of the overall and specific condition of each wilderness area. Information generated in monitoring wilderness conditions will indicate: 1) the current state of wilderness character; 2) how wilderness character is changing over time; 3) how stewardship actions are affecting wilderness character; and 4) what stewardship priorities and decisions would best preserve and sustain wilderness character. Monitoring will also provide Wilderness Managers with more complete information which will improve the evaluation of future proposed activities. The monitoring will not be used to compare these wilderness areas with other wilderness areas in the National Wilderness Preservation System, but to track the conditions and changes within the wilderness areas themselves.

The following monitoring would assist the BLM in tracking and improving the untrammelled condition of the wilderness areas:

- A log of all annual management and other activities that control or manipulate flora, fauna, soils, water or natural disturbance factors present in the wilderness would be maintained in each area’s permanent wilderness file. A description, location, purpose and expected outcome of each activity would be documented. Activities that may be tracked include:
  - Rehabilitation projects
  - Fire suppression activities
  - Emergency Stabilization and Rehabilitation activities

- Treatments of noxious or invasive vegetation
- Wildlife management activities
- Periods of livestock grazing

The following monitoring would assist the BLM in preserving the outstanding opportunities for solitude or a primitive and unconfined type of recreation:

- A log of sights and sounds of civilization would be maintained in each area's permanent wilderness file. A description and location of the activity inside or outside the wilderness areas would be documented.
- A log of all regulations or restrictions occurring in the wilderness areas will be maintained in each area's permanent wilderness file. A description of the regulation and its purpose will be documented.
- Visitor use encounters on designated trails and in the Mecca area of the Big Rocks Wilderness would be monitored through one or more of the following methods:
  - Visitor sign-in and comment forms at trailheads and access points
  - Public comment received by mail or by e-mail
  - Automated visitor counters may be located at trailheads or access points
  - Wilderness Rangers or volunteer stewards would visit trailheads, access points and the Mecca area at least once every two months to record the number of vehicles and collect written comments or other trail data
  - Wilderness Rangers or volunteer stewards would hike each trail at least twice a year to record the number of encounters and trail conditions. Trail conditions would be recorded using a Global Positioning System (GPS) and photos would be taken as needed
- The wilderness areas would be monitored at boundary roads and access points at least once every two months by Wilderness Rangers, Law Enforcement Rangers or volunteer stewards to detect any unauthorized uses. Over-flight monitoring may be used to assist in detecting unauthorized uses as well.
- Campsites would be recorded by the Wilderness Ranger to assure compliance with plan standards. Campsites would be recorded by GPS and photos taken to track long-term trends.
- Mecca would be monitored at least once every two months by Wilderness Rangers, Law Enforcement Rangers or volunteer stewards for foot-worn hiking trails, impacts to cultural resources and unauthorized methods such as chipping or gluing.

The following monitoring would assist the BLM to track and, where possible, improve the undeveloped and natural appearance of the wilderness:

- A log of all the developments, structures, and facilities present in the wilderness areas would be maintained in each area's permanent wilderness file. A description, location, purpose and expected outcome of the feature would be documented.
- All former vehicle routes that are rehabilitated will be checked in the field at least twice a year to assure they are not continuing to receive motorized use. If unauthorized vehicle use continues, modifications as described in the plan would be made to the closure.

The following monitoring would assist the BLM in preserving the naturalness and primeval character and influence of the wilderness:

- A log of all known human alterations to the ecosystem will be maintained in each area's permanent wilderness file. A description and location will be documented or referenced. Conditions that may be tracked include:
  - Non-native species
  - Threatened, endangered and sensitive species
  - Species no longer present in the wilderness
  - Air quality
  - Presence, abundance, and distribution of native species
- A log of natural disturbances will be maintained in each area's permanent wilderness file. A description and location will be documented or referenced. Activities that may be tracked include:
  - Fire
  - Flood
  - Insect or disease outbreaks
- Monitoring for noxious weeds will occur at least once a year, especially focused at springs, on trails or in washes receiving regular visitor use.
- Wildlife monitoring will be accomplished primarily by the Nevada Department of Wildlife, according to the agency's established protocol. The BLM Wilderness Rangers will also record wildlife sightings, especially for nesting raptors, bighorn sheep and mule deer. Monitoring or research by other entities may occur according to protocol described in the plan.
- Vegetation monitoring for livestock utilization will be done. Standards for protection of rangeland resources are identified in the Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration in the BLM's Grazing Regulations. On BLM lands in southern Nevada, the area-specific standards and guidelines are set in the Mojave – Southern Great Basin Standards and Guidelines. Monitoring for cattle presence will be incorporated into all other monitoring tasks.

- Findings, or a reference to the findings, from inventory, monitoring and research projects completed in the wilderness areas will be included in each area's wilderness file. Other known research outside the wilderness but applicable to the understanding of the wilderness ecosystem may be referenced.
- Monitoring to assess the effects of recreation on wildlife will occur where feasible monitoring methods are developed to track recreation-caused changes in wildlife use patterns within the three wilderness areas.
- Monitoring will be included to account for changes to the natural fire cycle occurring from introduced annual grasses. This additional monitoring will aid fire management in determining Appropriate Management Response on an annual basis. For fires having greater potential to convert native vegetation to unnatural annual grass-dominated vegetation, fire management will have better information to adjust response to the most active suppression response compatible with the fire management objectives and procedures for the area.

## Plan evaluation

All field reports, photographs and monitoring data will be maintained in the official wilderness files at the BLM's Ely Field Office. The plan will be revised when the management actions prescribed no longer meet the wilderness management objectives, or when a change in the existing situation warrants revised management. The need for revision will be reviewed every five years. If the decision is made to revise the plan, it will be accomplished with public participation. Minor revisions such as typographical or cartographical errors may be made by inserting an errata sheet.

## Plan Implementation Sequence

Management of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas will be carried out in accordance with this plan under the direction of the Ely BLM Wilderness Staff. Other BLM staff and volunteers may be called upon for support or subject expertise. Four types of management activities may occur. The first two of these types of management activities may be completed based upon the NEPA analysis done for this plan: 1) ongoing activities carried out through the life of the plan; and 2) activities that will be implemented as special projects at the beginning of the plan. The second two types of management activities will require action-specific NEPA analysis before they can be completed: 3) management activities triggered by changes in conditions as detected through monitoring; and 4) activities that may be proposed in the future for which general guidance exists in the plan, or that may not be addressed in the plan. The following list shows the priority sequence for accomplishing management activities of the plan. The actual implementation could be altered based on funding and staff availability outside the control of this plan.

### ***Ongoing Activities***

- Maintenance of boundary signs
- Trail and vehicle access point maintenance
- Vegetation clearing around archaeological resources
- Wilderness monitoring
  - Visitor use monitoring
  - Natural resource monitoring
  - Trail condition monitoring
  - All other wilderness character monitoring
- Visitor information dissemination

### ***Special Projects (Implementation would not require additional NEPA analysis)***

- Archaeological, botanical and threatened and endangered species clearances to support plan implementation
- Write and publish supplemental rules for all visitor use standards established in the plan as specified under 43 CFR 8365.1-6
- Rehabilitation
  - Former vehicle routes

- Campsites
  - Prospecting disturbance
- Vehicle access parking points established
- Trail designation
  - Trail preparation (improvement of sections not currently within standards)
  - Trailhead development
- Signing
  - Trailhead and vehicle access point wilderness information signs
  - Off-site kiosks
- Removal of unnecessary structures and installations
- Livestock developments
  - Construction, modification or removal of developments as appropriate
- Fire management plan

***Changing conditions requiring subsequent NEPA analysis***

- Emergency Stabilization and Rehabilitation
  - New visitor impacts
  - Fire rehabilitation
- Trail reconstruction or stabilization
- Management of social conditions
  - Visitor use regulations
  - Group size limits
- Fire suppression
- Non-native plant control

***Potential future proposals requiring subsequent NEPA analysis***

- Guiding permits
- Wildlife projects
- Research on natural or cultural resources

Any future proposals not analyzed within this document will require a separate Environmental Assessment and 30-day public notification.

# **Environmental Assessment**

## **Introduction**

The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas were designated by the Lincoln County Conservation, Recreation and Development Act of 2004 (Public Law 108-424 November 30, 2004). This environmental assessment covers actions described in the Wilderness Management Plan. Subsequent site-specific NEPA analysis will be prepared as necessary to address future actions.

## **Need for Proposal**

BLM policy is to manage wilderness areas under the guidance of a Wilderness Management Plan. This plan and the subsequent implementation would:

1. Identify the conditions and opportunities which will be managed for within the wilderness areas
2. Manage access to and in the wilderness areas
3. Mitigate potential impacts

The need for the plan is to create specific management guidance addressing resources and activities in the wilderness to preserve the areas' wilderness characteristics. Wilderness characteristics are cumulatively identified as the untrammeled quality, outstanding opportunities for solitude or a primitive form of recreation, undeveloped character, naturalness and primeval character, and special features of wilderness areas. The purpose is also to identify actions that would be implemented upon adoption of the plan and those that may be implemented in the future if changes in resource conditions occur.

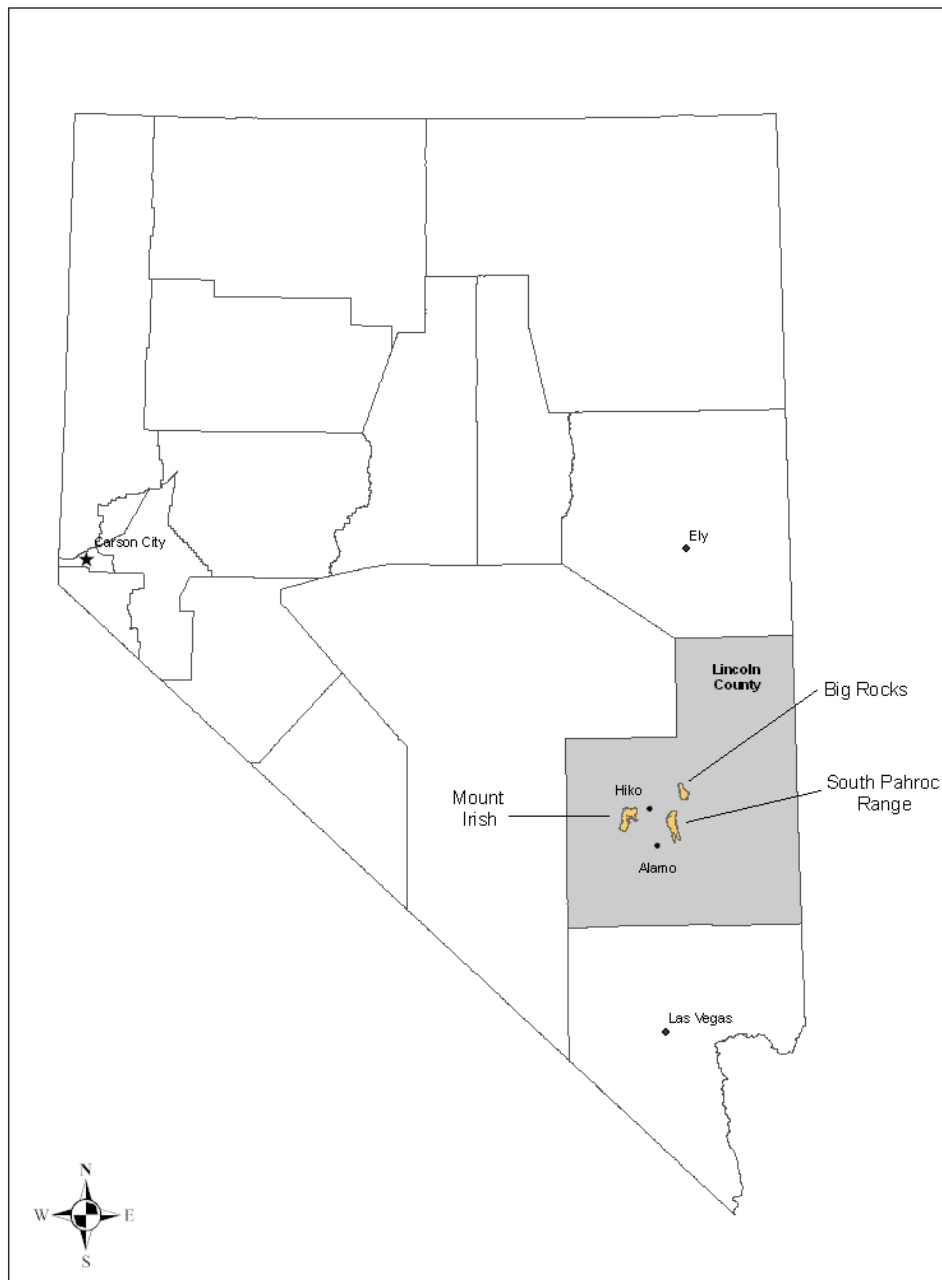
Due to their proximity and similar management issues, these three wilderness areas are being addressed in a single management plan.

## **Location**

The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas are located approximately 15-35 miles west of Caliente in Lincoln County, Nevada and approximately 15 miles north of Alamo in Lincoln County, Nevada.



## EA Map 1. Overview of Wilderness Areas



### Relationship to Planning

The proposed Wilderness Management Plan has been analyzed within the scope of the following land use plans and has been found to be in conformance with the goals, objectives and decisions of these documents (as required by 43 CFR 1610.5): Caliente Management Framework Plan (1983) and Schell Management Framework Plan (1981). The proposed plan is also in conformance with the draft Ely Resource Management Plan released for public review in July of 2005.

The proposed Wilderness Management Plan is not consistent with the Lincoln County Public Land & Natural Resource Management Plan of 1997. The Plan states “No additional wilderness areas shall be designated in Lincoln County.” The Lincoln County Commission did support the Lincoln County Conservation, Recreation and Development Act of 2004.

## **Relationship to Statutes, Regulations, or Other Plans**

The plan conforms to the Wilderness Act of 1964 (Public Law 88-557), The Federal Land Policy and Management Act of 1976 (Public Law 94-579), The Lincoln County Conservation, Recreation and Development Act of 2004 (Public Law 108-424), the National Environmental Policy Act of 1969 (Public Law 91-190), Grazing Guidelines (House Report No. 101-405, Appendix B), and Wildlife Management Guidelines (House Report No. 101-405, Appendix B). The plan is in conformance with 43 CFR Part 6300-Management of Designated Wilderness Areas, and BLM Manuals 8560 – Management of Designated Wilderness Areas, and 8561 – Wilderness Management Plans.

## **Issues**

Issues of primary importance identified during the internal and external scoping process for this Wilderness Management Plan include:

- Opportunities for solitude and primitive, unconfined recreation
- Protecting and enhancing the undeveloped and natural appearance of the wilderness areas
- Preserving naturalness, primeval character and influence of the wilderness areas
- Management of special non-wilderness land uses allowed by the Wilderness Act

One issue identified during public scoping was considered out of scope of this plan: change to the boundaries of designated wilderness to allow motorized use within currently designated wilderness. The BLM manages wilderness boundaries as designated by Congress. It is not the purpose of a Wilderness Management Plan to adjust boundaries to meet management goals and objectives.

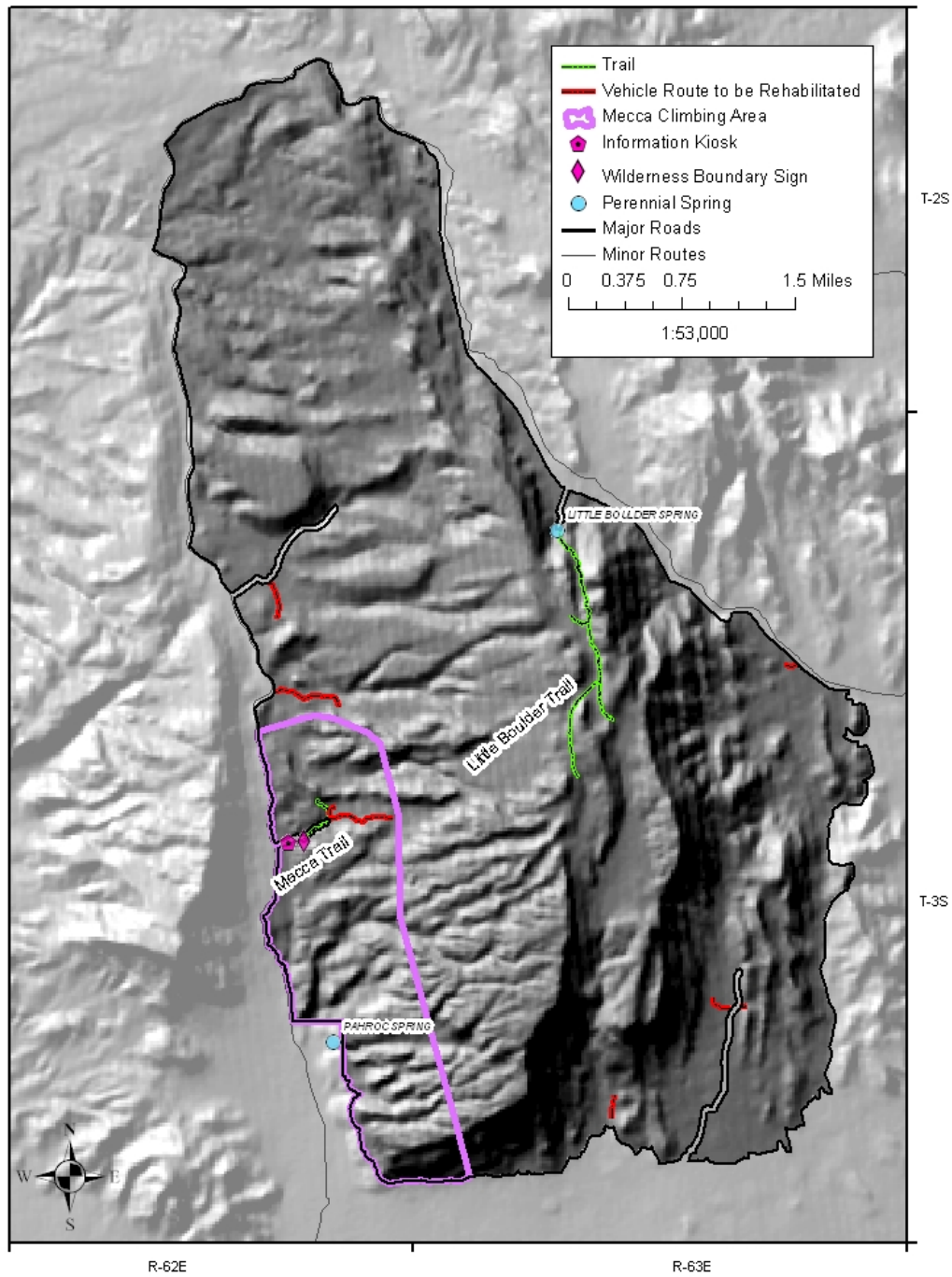
## **Description of Proposed Action and Alternatives**

Actions identified in all three alternatives would apply to the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas unless otherwise specified.

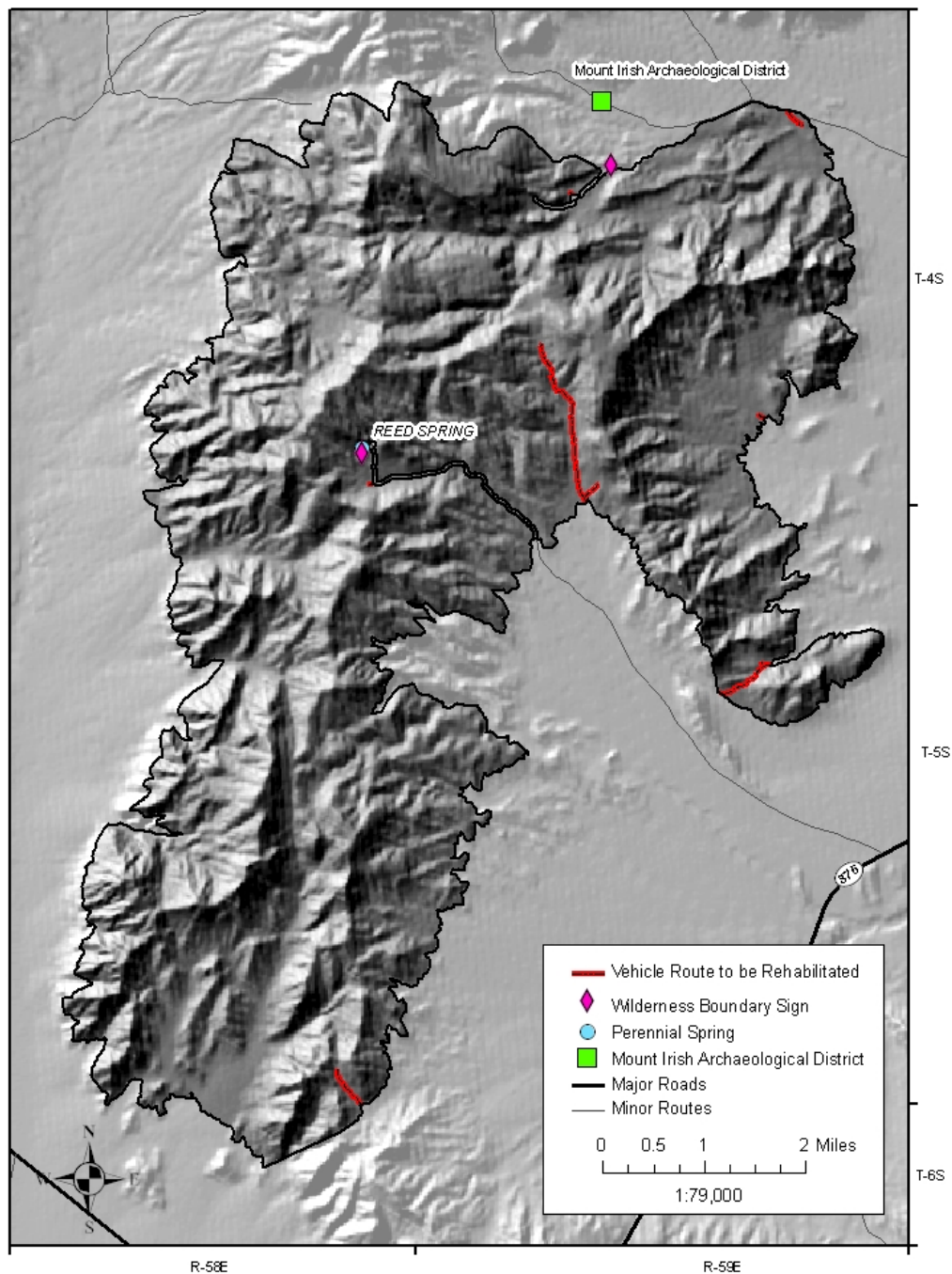
### **Alternative 1 (Proposed Action)**

The proposed action emphasizes the need to maintain and enhance the wilderness qualities of the three areas with the public's increasing desire for recreational access. This alternative designates two short trails in the Big Rocks Wilderness to provide additional access and limit resource impacts. It also allows for more proactive management methods across all three areas should monitoring show unacceptable impacts to wilderness qualities resulting from recreational use. This alternative would also allow for the rehabilitation of 6.5 miles of existing illegal motorized routes and any future illegal motorized routes within the three areas for the enhancement of the wilderness quality of naturalness. Under this alternative, wildland fire would be aggressively suppressed to maintain the natural fire intensity and frequency as well as to preserve a more natural vegetative community.

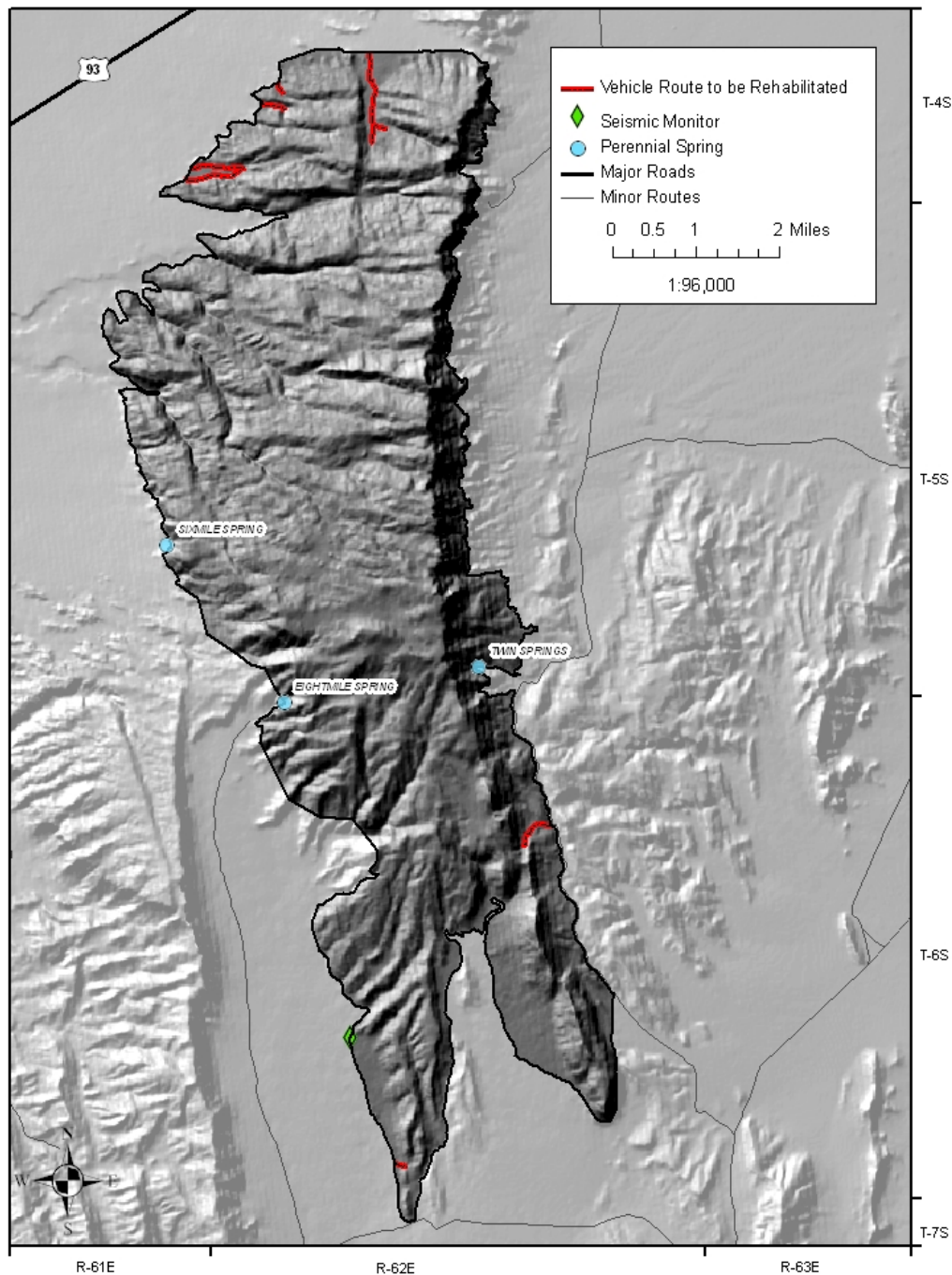
**EA Map 2. Proposed Action for the Big Rocks Wilderness**



**EA Map 3. Proposed Action for the Mount Irish Wilderness**



**EA Map 4. Proposed Action for the South Pahroc Range Wilderness**



### ***Noxious and Invasive Weeds***

The management ideal is to sustain only native species in wilderness areas. Noxious weeds are determined by the Nevada Department of Agriculture. Monitoring for noxious weeds would occur on an annual basis. Where noxious weeds are found, emphasis would



be placed on controlling small infestations, plants likely to spread and displace native plants, or plants that may disrupt ecosystem function. In addition to noxious weeds, the same strategy would be applied to the invasive annual sahara mustard. If effective control or eradication is possible, control practices would be prioritized in the following order:

- Grubbing with hand tools if plants would not re-sprout and where infestations are of a size manageable by hand crews
- Herbicides applied by backpack and pack stock equipment where grubbing is not effective
- Biological control agents approved by the Animal and Plant Health Inspection Service (APHIS) where infestations are of such size that eradication by grubbing or herbicides is not feasible
- Herbicides applied aerially or with motorized equipment where control is feasible, where control impacts are quickly and readily rehabilitated, and where the infestation is of such size that herbicide cannot be effectively applied without motorized equipment

Selection of the control method would be based on its effectiveness as determined by plant biology, the minimum tool objective and impact to the wilderness resource. If herbicides are necessary, those approved for use on BLM lands may be used according to other existing requirements. Reseeding control areas with native species would be incorporated where local seed sources are not adequate for natural recruitment.

Invasive weeds present in the three areas include the annual grasses cheatgrass and red brome. No reliable control or eradication methods have been identified for cheatgrass or red brome. If reliable methods are developed in the future, they could be considered for application in these three wilderness areas based on the minimum tool objective and impact to wilderness qualities.

#### ***Wildlife Management Activities***

Wildlife management activities within these designated wilderness areas would be in conformance with the Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife (BLM MOU 6300-NV930-0402), which is found as an attachment to this planning document.

In furtherance of the purposes and principles of the Wilderness Act, management activities to maintain or restore wildlife populations and the habitats to support such populations may be carried out within wilderness areas designated by the Lincoln County Conservation, Recreation and Development Act, including the occasional and temporary use of motorized vehicles, if such use, as determined by the Secretary of Interior, would promote healthy, viable and more naturally-distributed wildlife populations that would enhance wilderness values and accomplish those purposes with the minimum impact necessary to reasonably accomplish the task.



*Bighorn Sheep in the South Pahroc Range Wilderness*

### ***Wildlife Relocation***

Transplants (i.e., removal or reintroduction of wildlife species) may be permitted if necessary: 1) to perpetuate or recover a threatened or endangered species; or 2) to restore the population of indigenous species eliminated or reduced by human influence. Sites and locations outside of the wilderness areas would be utilized first, and if not available, transplants may be made to or from the wilderness areas in a manner compatible with the wilderness character of the area.

Only species whose indigenous range includes the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would be considered for relocation into the wilderness areas. When a species is in need of augmentation in the wilderness areas, and until such time as the population is thriving on its own, the BLM would consult with the Nevada Department of Wildlife in taking actions to suspend or reduce activities contributing to the condition until such time as the population is self-sustainable.

In furtherance of the values of these wilderness areas to the larger region, and when a species is sufficiently in excess of its viable population level in the wilderness areas, wildlife relocation from the wilderness areas may be approved to restore the population of the species at indigenous habitat elsewhere.

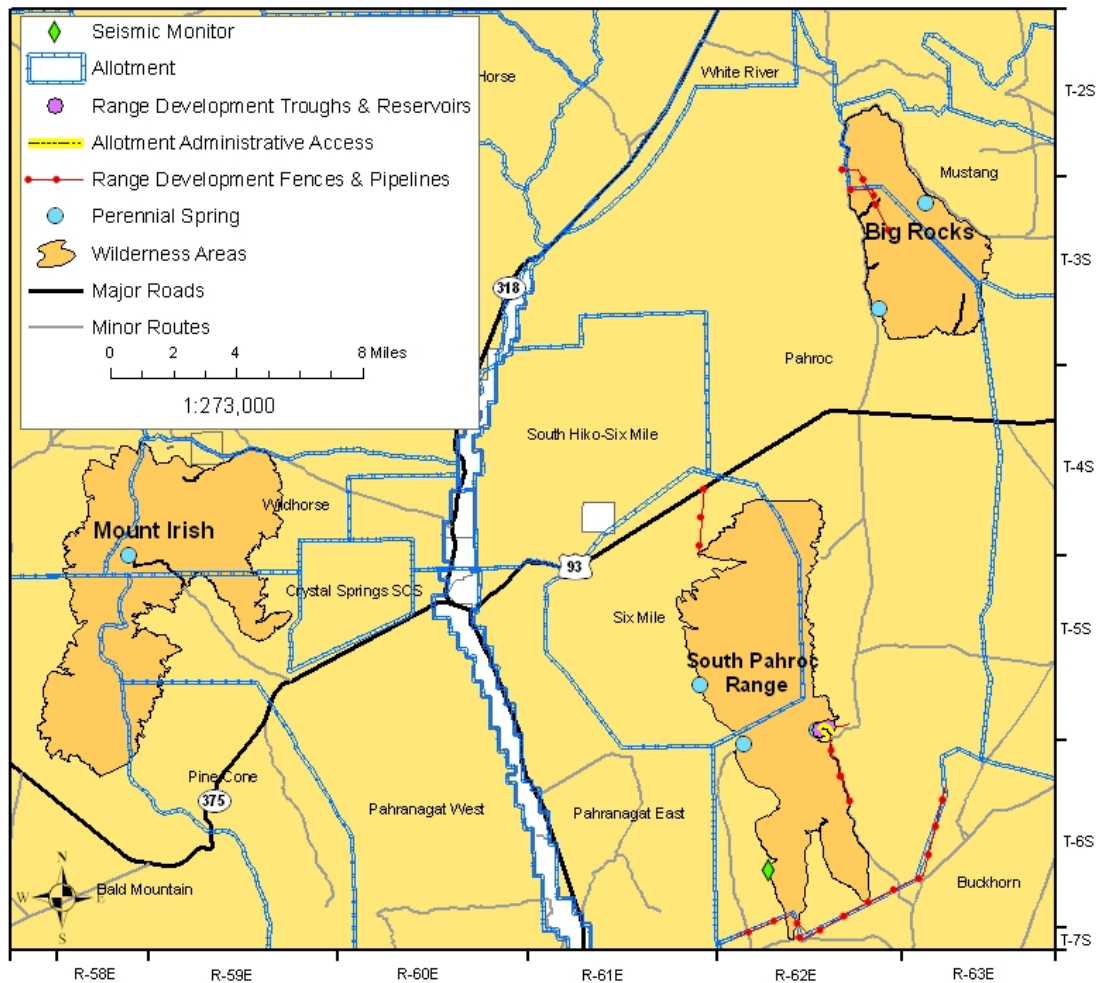
Relocation activities may be supported by motorized equipment or transport where it is necessary to meet the minimum requirements for the administration of the area as wilderness. Staging would occur outside the wilderness boundary. Timing would consider visitor use of the area and would normally be scheduled during periods when visitor use is low (for example, weekdays). In order to inform visitors of impending activity, relocation days would be posted on the BLM website two weeks in advance of activity.

### ***Wildlife Water Developments***

New water developments may be permitted only when essential to preserve the wilderness resource and when necessary to maintain the local indigenous wildlife population where human activity has caused loss of water within the local population's indigenous range, and an artificial water source cannot be located outside the wilderness areas to achieve the same purpose. Construction, maintenance and water replenishment activities may be supported by motorized equipment or transport where it is the minimum necessary for the administration of the area as wilderness. If approved, developments would be visually minimized and may not utilize trucked-in water. Inspection and maintenance of facilities would take place by non-motorized and non-mechanized means except for major maintenance requiring large parts or tools which cannot be transported by foot or pack stock.

Wildlife water developments would not be approved in the Mecca area of the Big Rocks Wilderness where bouldering is a current known use and conflicts between wildlife and bouldering may occur.

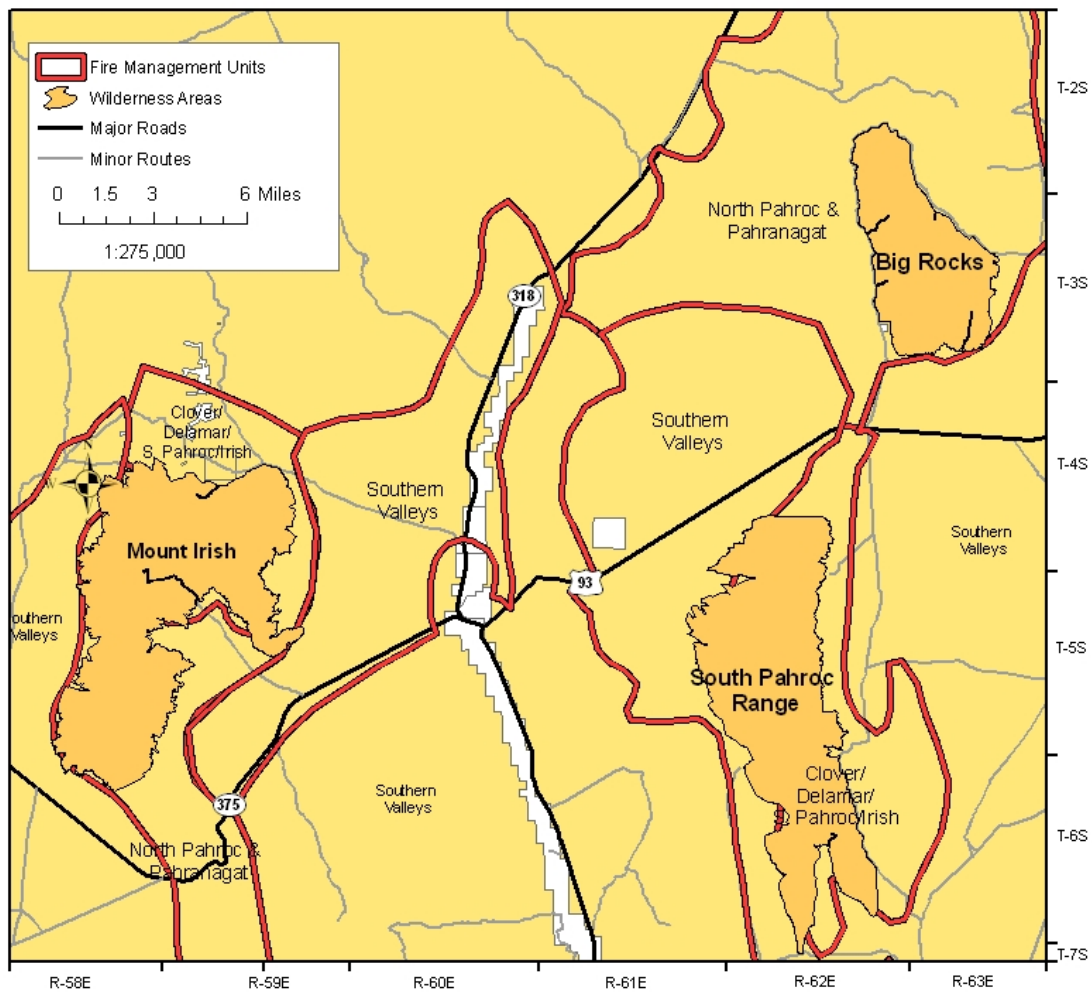
**EA Map 5. Water Developments and Springs**



### ***Fire Management***

Fire Management in the Big Rocks Wilderness, Mount Irish Wilderness and South Pahroc Range Wilderness would be conducted in accordance with the Ely Field Office Fire Management Plan (BLM 2004). In the North Pahroc and Pahranaagat Fire Management Unit (FMU), including the Big Rocks Wilderness and the Mount Irish Wilderness, 90 percent of individual fires would be held to 300 acres or less and no more than 10,000 acres burned in a ten year period. In the Clover, Delamar, South Pahroc, Irish FMU, including the South Pahroc Range Wilderness, 90 percent of individual fires would be held to 1,000 acres or less and no more than 50,000 acres burned in a ten year period.

**EA Map 6. Fire Management Units**



Appropriate Management Responses (AMR) for both FMUs would be developed for all wildland fires in the planning area and would include a range of specific actions from monitoring, confinement, initial attack and suppression/extinguishment or wildfire suppression with multiple strategies. AMR would be determined for each wildland fire based on site factors, including fuel loading and fire behavior, while ensuring the safety of firefighters and the public; the protection of private property would also be considered.

Fire may be fought aggressively, but utilizing techniques that employ suppression standards necessary to stop the fire with the minimum adverse impact on wilderness characteristics. Minimum Impact Suppression Tactics (MIST) and a policy of no motor vehicles would be used unless necessary to protect human life, property or wilderness characteristics. Motorized vehicles, including earth-moving equipment and aircraft, may be used with the Field Manager's approval to protect natural resources by stopping large escaped fires that threaten to convert the native plant community from native vegetation to a dominance of non-native vegetation. Wildfire management priorities include maintaining native vegetation diversity by managing fire size to minimize the spread and

density of annual invasive grasses, cheatgrass and red brome and noxious weed species such as spotted knapweed, Russian knapweed, hoary cress and tamarisk, where they are known to occur.

Prescribed fire may be allowed within these wilderness areas under an approved Fire Management Plan for the following purposes: 1) to reintroduce or maintain the natural condition of a fire-dependent ecosystem; 2) to restore fire where past strict fire control measures have interfered with natural ecological processes; or 3) where a primary value of these three wilderness areas would be perpetuated as a result of the burning.

Any actions deemed necessary by the Incident Commander for public and firefighter safety would be authorized.



*Burn Area in the South Pahroc Range Wilderness*

### ***Emergency Stabilization and Rehabilitation***

Active rehabilitation work would occur in situations necessary to stabilize soil to prevent damage to downstream human life or property, or to prevent the site from becoming dominated by non-native species. Active rehabilitation with hand tools would also occur to obscure fire lines with rock or brush. If motorized earth-moving equipment is used to construct fire lines, the same type of equipment may be needed for rehabilitation and recontouring before the equipment is released from the fire. When active rehabilitation is determined necessary, native species should be utilized, with a preference for local genetic stock if available. Otherwise, where natural vegetation is expected to return in a reasonable time, no rehabilitation work would be done.

Should a reliable method to control or eradicate annual invasive grasses be developed, including the potential use of non-native, non-invasive vegetation, it may be applied in these wilderness areas after site-specific analysis and State Director approval.

Emergency stabilization and rehabilitation treatments would be monitored annually. All monitoring would be conducted without the use of motorized or mechanized equipment.

### *Suppression Guidelines for Wilderness*

- A Wilderness Specialist would be dispatched to all fires occurring in or threatening a wilderness area.
- Use of any motorized equipment must be approved by the Field Manager.
- Heavy equipment (bulldozers, etc.) would only be used in wilderness if the fire is threatening human life, property or wilderness characteristics. The Field Manager must approve the use of heavy equipment in all cases.
- It is preferable to locate helibases and helispots outside wilderness boundaries. However, if helibases and helispots cannot be located outside wilderness boundaries, they may be approved within wilderness boundaries by the Field Manager. The use of helibases and helispots should meet the minimum tool objective.
- Sling loading materials into or out of wilderness using a helicopter must be approved by the Field Manager and should meet the minimum required tool objective.
- Helicopters or other aircraft may be used for aerial reconnaissance work.
- Staging areas and fire camps requiring motorized access would be located outside of wilderness unless authorized by the Field Manager.
- Staging areas and fire camps that only require non-motorized access may be located in wilderness areas if authorized by the Resource Advisor.
- The Ely Field Office Noxious Weed Prevention schedule which identifies best management practices would be utilized. Suppression resources would be inspected and washed to prevent the spread of noxious weeds. Wash-down sites would be recorded using a GPS unit if possible and reported to the Ely Field Office Weeds Coordinator. Camps and other assembly points would not be located in noxious weed infestation areas.
- Use of retardant must be approved by the Field Manager; if retardant is not approved, water may be dropped from retardant aircraft as ordered by the Incident Commander without additional authorization required.
- All fire suppression activities in wilderness would use Minimum Impact Suppression Techniques (MIST) unless a higher degree or level of fire suppression is required.
- Leave No Trace principles would be used in wilderness areas. All evidence of human activity should be removed to the maximum extent possible.



### ***Archaeological Resources and Historic Properties***

For protection and enhancement of these supplemental values within the three wilderness areas, vegetation may be cut back or removed up to several feet to protect sensitive resources, such as prehistoric rock art, from wildland fire. This would be accomplished using tools such as pruning shears, pulaskis or other hand tools once annually in the spring, before fire season, and would be completed by trained cultural site stewards during routine monitoring visits.



*Rock Art in the Big Rocks Wilderness*

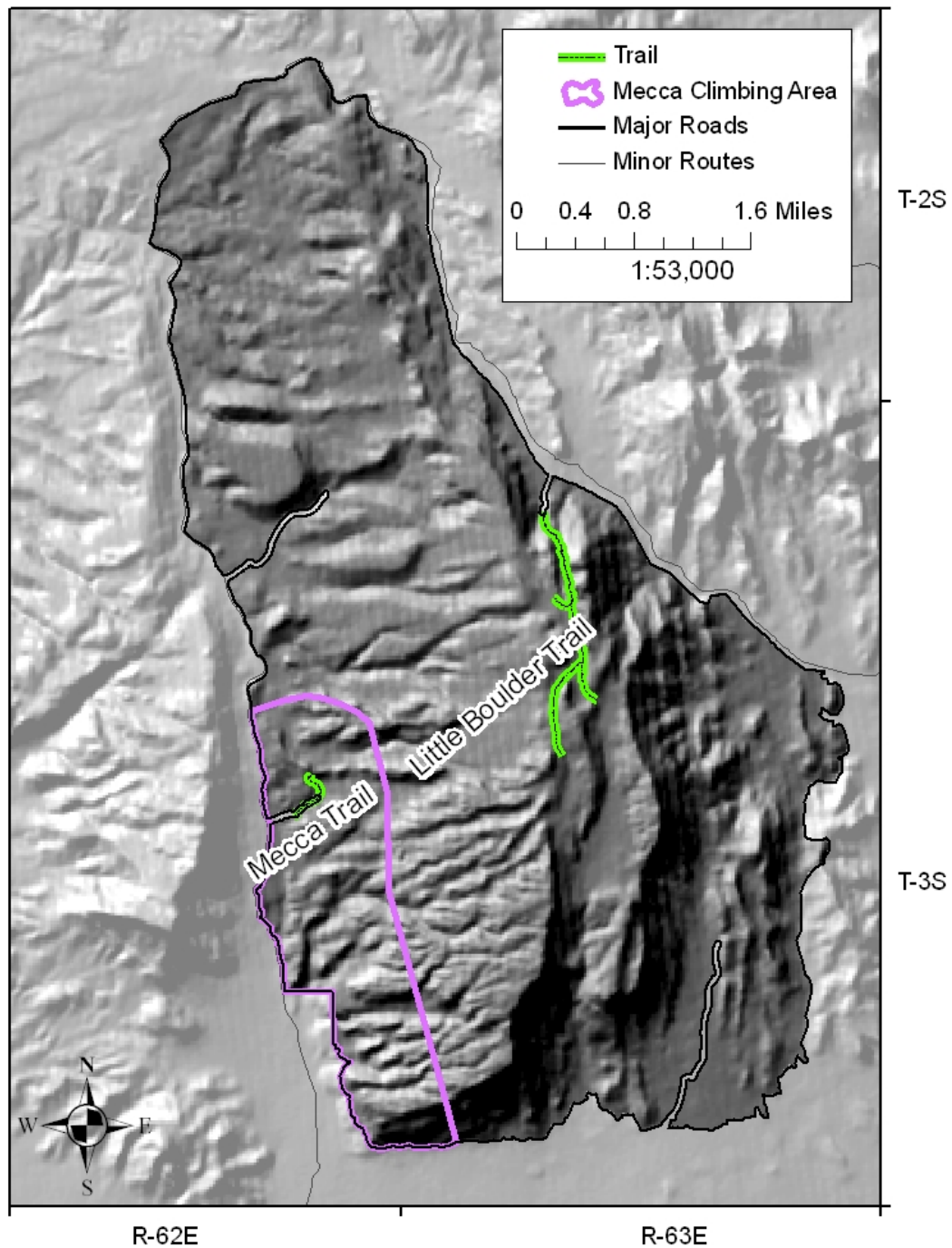
Every attempt would be made for protection of artifacts in place; if artifacts are discovered in designated trails, foot-worn hiking paths or other areas of recreational use, they may be collected after consultation with the Ely Field Office Archaeologist and Wilderness Planner.

A reconnaissance inventory for archeological resources would be completed at spring sites in proximity to or within the wilderness areas, along access routes and cherry stemmed routes to aid in management decisions for the protection of these resources.

### ***Trails***

The following existing trails would be designated and converted to hiking and equestrian trails and displayed on BLM maps: in the Big Rocks Wilderness, 1) the Mecca Trail; and 2) the Little Boulder Trail. Designated trails would be regularly maintained by the BLM, and displayed on BLM maps, brochures and the Ely Field Office website. No other trails would be constructed or designated within the three wilderness areas. If not designated as a trail or retained as a foot-worn hiking path, any new trails would be rehabilitated.

**EA Map 7. Trails in the Big Rocks Wilderness**



These two designated trails would total approximately 2.5 miles in the Big Rocks Wilderness. A cultural inventory would be completed along these trails. The Mecca Trail is approximately 0.5 miles in length and is the main access into the Big Rocks boulder fields within the designated wilderness. The Mecca Trail is currently a two-track route

that turns into a single-track hiking trail; it would be converted to a single-track trail along its entire length. The Little Boulder Trail is an existing single-track trail that begins at Little Boulder Spring and accesses the higher plateau of the wilderness. The Little Boulder Trail would require a short reroute of approximately 0.75 miles to minimize impacts to grazing operations and wildlife use of water associated with Little Boulder Spring. The trail reroute would leave from below the existing corral outside the wilderness and follow the wash to the intersection with the existing trail. These trails would not be marked on the ground, but would be indicated on BLM maps. Foot-worn hiking paths may occur and may be available for use upon discovery by visitors. These informal paths would not be marked on the ground, displayed on BLM maps or brochures, or normally receive maintenance.

No known foot-worn hiking paths exist within the three wilderness areas. Monitoring for new foot-worn hiking paths would specifically occur in the Mecca area of the Big Rocks Wilderness, the southern drainage of the South Pahroc Range Wilderness, all vehicle access points and those 6.5 miles of unauthorized motorized routes closed at the time of wilderness designation. An inventory of new foot-worn hiking paths would be maintained and monitored for resource damage. Monitoring would identify paths with different levels of trampling, leading to primitive camping areas, cut vegetation or other evidence of use (see the Monitoring section at the end of the Proposed Action).

As new foot-worn paths are discovered, they would be evaluated for impacts to wilderness character (including natural and cultural resources) and the management objectives of this plan. When appropriate and where possible, new foot-worn hiking paths may be rehabilitated (see guidelines for rehabilitation of disturbances later in this section) or retained. When a foot-worn hiking path is retained, it may be rerouted, improved or maintained to follow designated trail guidelines to make the trail compatible with protecting resources while preserving the wilderness character of the area.

Both designated trails and, when determined appropriate, informal foot-worn paths may be maintained or rerouted where they are causing or anticipated to cause damage to wilderness character. Examples for when trail maintenance or rerouting would occur include:

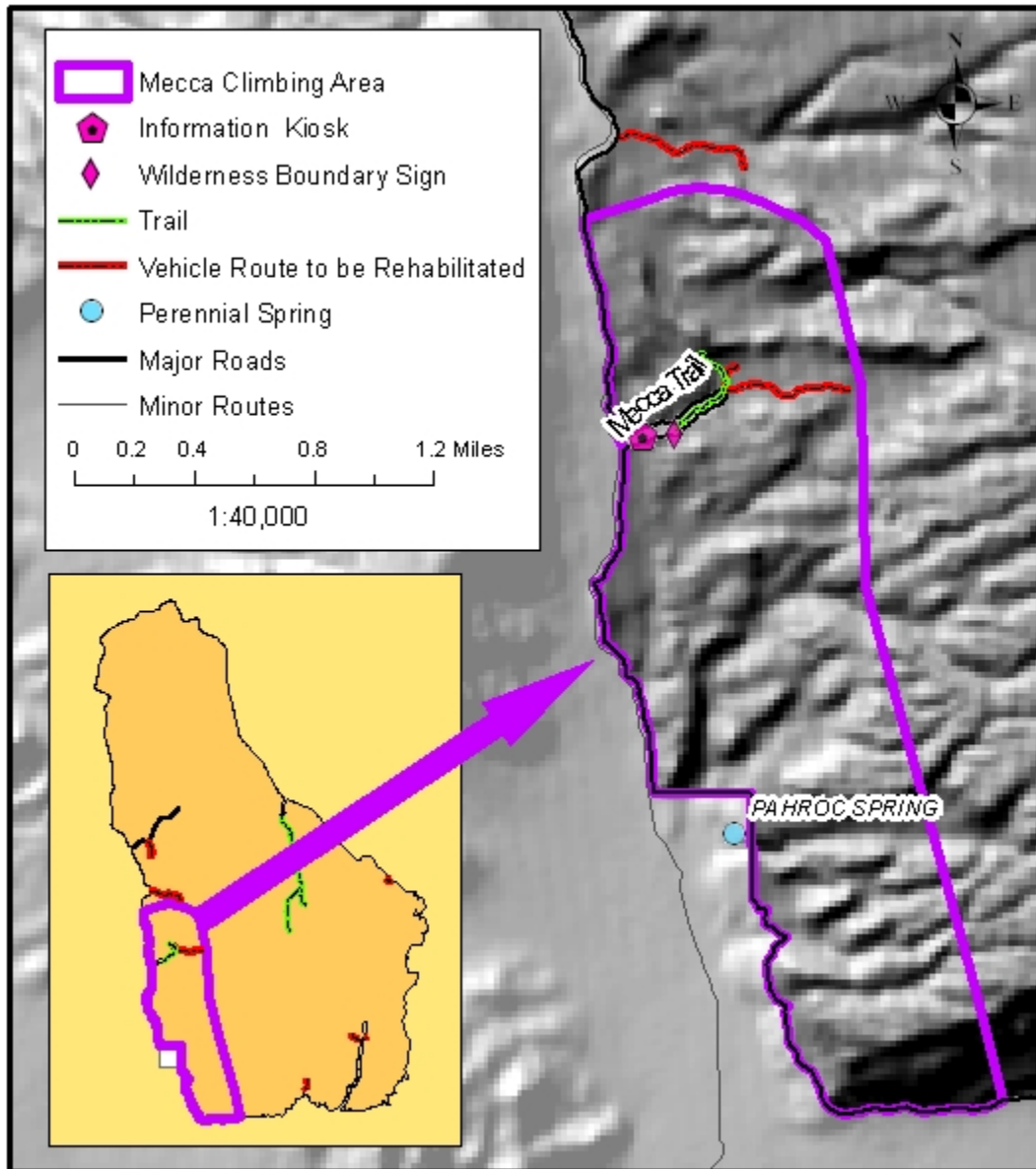
- Slopes greater than 15 percent, beyond which potential for excessive soil erosion and trail deterioration is high. Very short, steep sections may be retained where reinforcement with native rock would prevent soil erosion. Rolling dips or rock-enforced water bars would be utilized to reduce water-caused soil erosion.
- Where trail braiding or duplicate routes exist or are beginning to occur, the most appropriate trail would be selected and the duplicate route(s) blocked, barricaded or otherwise rehabilitated with rock or native vegetation.
- Trails would be limited to a width of 24 inches, not to exceed 36 inches except trail sections along precipices (where it may be wider for safety) or in washes. Tree limbs or fallen trees may be cleared within ten feet high and four feet to either side of trail (cutting limbs at trunk) or, where practical, minor trail relocation may be done to avoid the tree.

- Trails may be rerouted to avoid damage to natural or cultural resources.

***Manage Bouldering (climbing on small rock formations)***

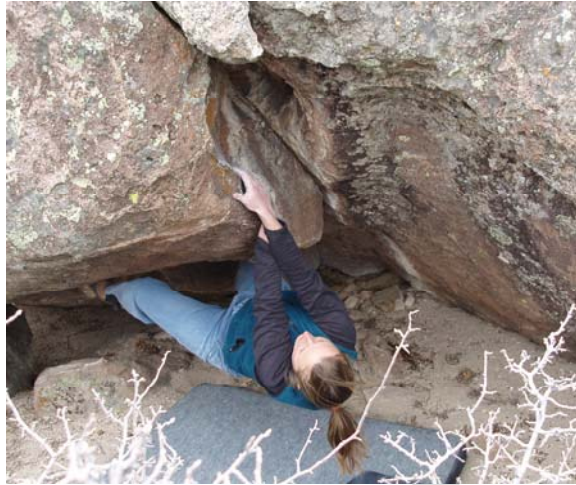
Bouldering would be permitted in these wilderness areas, and for the most part, is likely to occur only in the Mecca area of the Big Rocks Wilderness.

**EA Map 8. The Mecca Climbing Area**



Damaging practices, including chiseling or chipping rock, forcibly prying off rock, gluing or otherwise affixing artificial holds on rock and destroying vegetation to enhance a route, would be prohibited. These prohibitions would be indicated on information kiosks for the area, BLM brochures and on the BLM website. Climbing directly on, above or

adjacent to rock art panels would also prohibited; this restriction would be in accordance with the Archaeological Resources Protection of 1979, which states that “no person may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands” (Section 6(a)).



*Bouldering in Mecca*

It is likely that some foot-worn hiking paths connecting various boulders and other climbing-related surface disturbances would occur. This area would be specifically monitored for new foot-worn paths, disturbances and subsequent resource impacts. Foot-worn paths resulting from bouldering activities would be managed according to the above discussion. In addition, there is increased potential for trampling of soil and vegetation around boulders and staging areas. A staging area would be designated outside the Big Rocks Wilderness as described later.

Bouldering and climbing activities, such as the use of chalk, may be limited in smaller areas for the protection and preservation of archaeological and historic resources.

#### ***Manage General Recreation Activities***

A variety of recreation activities are likely to occur in all three wilderness areas. Management actions that may be initiated at signs of recreational impacts include, but are not limited to:

- Public outreach and education in Leave No Trace principles to encourage minimum impact practices
- Provide information to public on non-wilderness recreational opportunities in the region
- Establishment of a protective area around sensitive resources where recreation activities may be restricted
- Closure of areas to recreation activities

Hunting and trapping is permitted in the three wilderness areas subject to applicable State and Federal laws and regulations.

Recreational horseback riding and use of pack stock animals would be permitted in these three wilderness areas both on and off trail. Other than incidental browsing, riding and pack stock animals may only be fed with packed-in, certified weed-free feed.

### ***Camping***

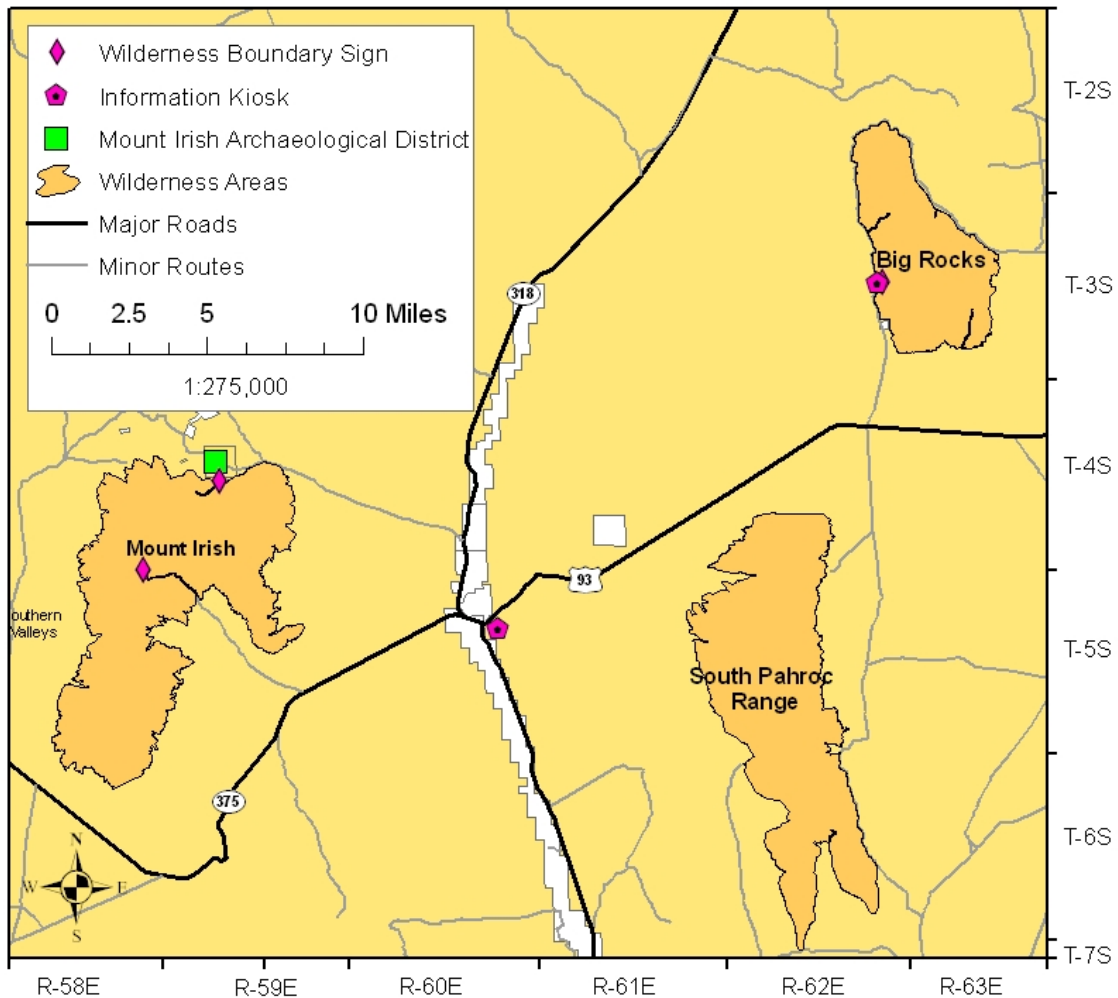
Backcountry camping would be allowed. Occupying a campsite would be allowed for up to 14 days. Should a visitor wish to camp longer than 14 days, their camp must be relocated a minimum of 25 miles from the previous site. If monitoring shows that the 14-day stay limit is leading to unacceptable resource impacts, site stay limits of less than 14 days could be implemented. Campfires would be allowed except under fire hazard restrictions. Visitors would be allowed to collect dead and down fuelwood for personal campfires during their trip. Leave No Trace camping techniques would be encouraged through literature, BLM-sponsored Leave No Trace Trainer courses and public workshops. If more than two campsites (identified by the presence of a campfire rock ring) are identified within a quarter mile of each other, the least impacted site would be restored to a natural condition to minimize additional camping disturbance. Campfire rings closer than 300 feet to sole water sources, in compliance with state regulations, would also be removed.

### ***Signs***

Wilderness boundaries would be identified by wilderness signs at key locations. Wilderness boundary signs at access points may be larger signs with the name of the wilderness. These larger signs would be placed specifically at the Mecca Trailhead to the Big Rocks Wilderness boundary, at the North access point of the Mount Irish Wilderness near the Archaeological District and the Logan Site, and at the Reed Spring access point in the Mount Irish Wilderness. These signboards would provide wilderness, natural and cultural resource interpretive information. Other access points may have smaller signboards to provide additional information. No directional signs would be placed for trails within wilderness.



**EA Map 9. Boundary Signs and Informational Kiosks**



An information kiosk would be placed at the Mecca staging area. A large information kiosk would be placed at the junction of Highway 93, and state routes 318 and 375, south of the community of Hiko. This kiosk would provide information on wilderness in Lincoln County and the Silver State Trail Off-Highway Vehicle Trail.

### ***Solitude***

In the Mecca area of the Big Rocks Wilderness, encounters with other groups more than 0.5 miles inside the wilderness boundary would be infrequent with no more than 12 encounters per day exceeded on no more than 12 days a year.

In the remainder of the Big Rocks Wilderness and the entire Mount Irish Wilderness and South Pahroc Range Wilderness, encounters with other groups more than 0.5 miles inside the wilderness boundaries from access points would be rare, with no more than two encounters per day exceeded on no more than four days per year.





*The Mount Irish Wilderness*

The following management actions, listed in order of priority, may be initiated if standards as identified above are exceeded:

- Educate visitors concerning Leave No Trace recreation ethics to reduce conflict with other visitors
- Provide information to the public on non-wilderness recreational opportunities in the region
- Establish a group size limit of 12
- Increase difficulty of access (reduces maintenance levels on access points and boundary roads, limit available public information, limit parking availability, etc.)
- A combination of the above methods
- Plan revision with additional public input to reassess these standards and/or implement more direct controls

### ***Guides and Outfitters***

Section 4(c) of the Wilderness Act prohibits commercial enterprises within wilderness. Section 4(d) allows for some commercial services to the extent necessary for activities which are proper for realizing wilderness purposes of wilderness areas.

Commercial guiding would be permitted for:

- Hunting
- Academically-oriented organizations whose primary purpose is wilderness or environmental education
- Organizations whose service is primarily for the support of people with disabilities

Guides would be subject to the same camping limitation as other visitors to the wilderness areas. Limits on the number of commercial hunting guides in wilderness may be implemented if monitoring identifies excessive impacts to wilderness character or other natural or cultural resources.

### ***Commercial Pine Nut Harvest Restrictions***

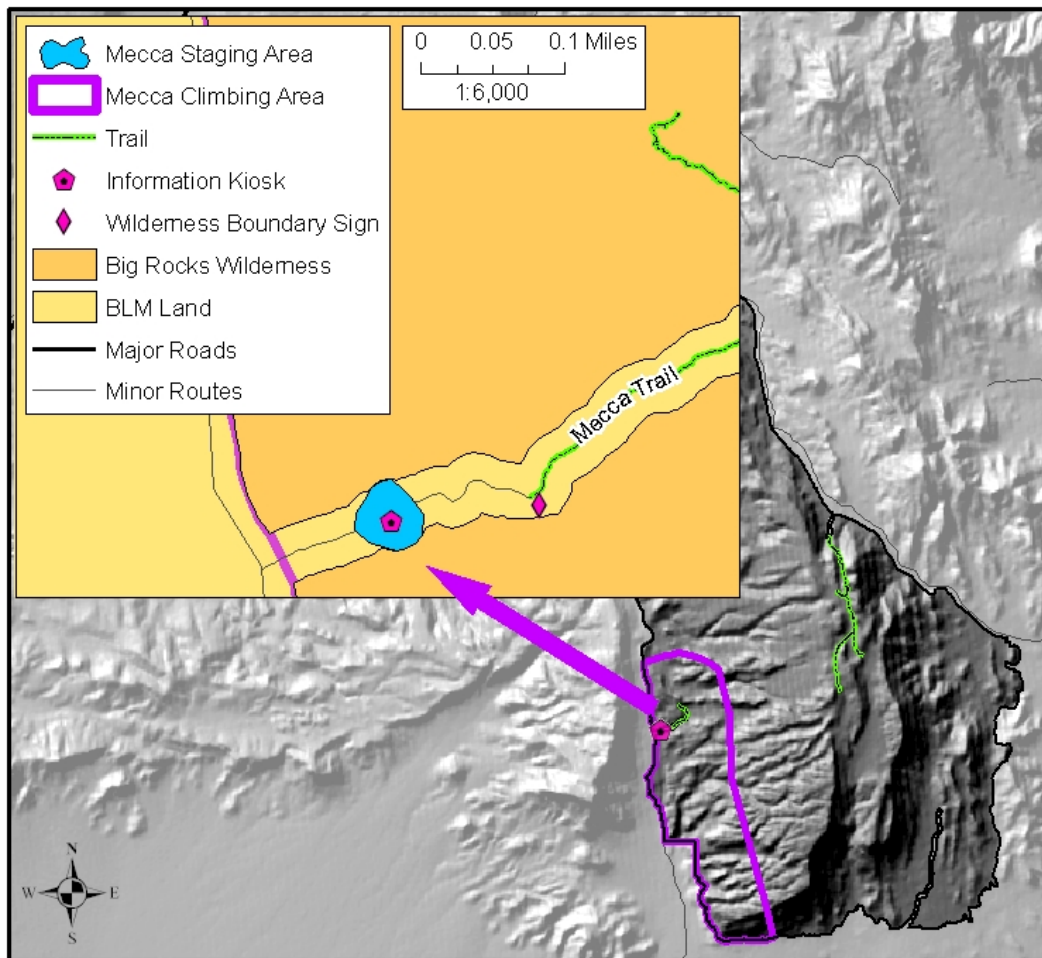
Section 4(c) of the Wilderness Act prohibits commercial enterprises within wilderness. Section 4(d) allows for some commercial services to the extent necessary for activities which are proper for realizing wilderness purposes of wilderness areas.

The three wilderness areas would be closed to commercial pine nut harvesting. Commercial pine nut harvest permits are not necessary for the public to enjoy the wilderness purposes of these three areas. The opportunities for commercial pine nut harvesting in non-wilderness areas remains large. Pine nut collecting for personal use within these three areas would continue to be allowed subject to land use planning decisions.

### ***Vehicle Access and Staging Areas***

A staging area would be designated at the Mecca area of the Big Rocks Wilderness. This area would occur outside the wilderness, approximately 1.75 miles north of the private property at Pahroc Spring along the access route to Mecca, and would accommodate several passenger vehicles. The area of disturbance for the staging area would be no more than two acres and would remain within the 200-foot non-wilderness corridor. The staging area would be defined by a low profile wooden rail fence and interpretive panel. A dispersed camping area occurs approximately 0.25 miles further along the route that would accommodate four additional passenger vehicles. The designated Mecca Trail continues on beyond the primitive camping area.

**EA Map 10. The Mecca Staging Area**



For the most part, visitors would access the wilderness areas in motorized and mechanized vehicles at additional points not designated as trailheads, where existing roads end at the boundary. These include five points at the Big Rocks Wilderness, eight points at the Mount Irish Wilderness and ten points at the South Pahroc Range Wilderness. Access routes would be maintained at their current condition. Wilderness access points would be defined by creating turn-arounds at suitable locations at or before wilderness boundaries to prevent vehicles from continuing into wilderness.

When a new turn-around must be created, it would occupy no more than 0.5 acres and leave adequate space for two vehicles to park parallel to the road without blocking the turn-around. Turn-arounds would not extend into the wilderness. They would be limited to the 100-foot boundary offset.

Vehicle barriers would be constructed outside the wilderness areas where natural barriers are not adequate to keep vehicles from traveling past the turn-around. Barriers would be prioritized as follows:

- Wilderness sign, berm associated with turn-around, small rocks and/or vegetation placement or restoration
- Large boulders moved by heavy equipment
- Posts
- Fence or gates

### ***Environmental Education and Interpretation***

General interpretive information for natural resources, cultural resources, wilderness and recreation would be located on kiosks, maps, brochures and the BLM website. There would be no interpretive trails designated.



*Cultural Interpretation  
in the Big Rocks Wilderness*

Public outreach for Leave No Trace recreation ethics would be emphasized with both classes and workshops presented at local schools and in the field. A separate wilderness public education plan would be developed for programs related to all designated wilderness in Lincoln County.

### ***Off-site Information***

Basic information about the wilderness areas (for example, safety, Leave No Trace, sensitive resources and some location information) would be provided in brochures, on the BLM website and on BLM Surface Management Edition maps. In addition, wilderness-specific maps would be produced with the designated trails, descriptions and interpretive information. Wilderness ethics and Leave No Trace principles would be included on maps.

The BLM would also coordinate with the U.S. Geological Survey to include wilderness boundaries on new USGS map printings, and remove from future USGS map printings, vehicle routes depicted within wilderness boundaries. In addition, the BLM would work with private map producers to include wilderness boundaries, trails and staging areas.

The BLM would collaborate with other agencies and non-government organizations in the presentation of basic information on these three wilderness areas when appropriate.

Information on these wilderness areas may also be made available by non-BLM sources, such as guide books.

### ***Research***

The three wilderness areas would be identified as priority areas for conducting basic and specific inventory, monitoring and research activities as they relate to the wilderness resource. Inventory, monitoring and research may generate the need for management actions to preserve wilderness characteristics. Research on wildlife, their habitats and the recreational users of these resources is a legitimate activity in these wilderness areas when conducted in a manner compatible with the preservation of the wilderness environment. Research on archaeological resources for the preservation of these important supplemental values to wilderness is also a legitimate activity in these areas.

Research proposals that do not contribute to the improved management of the area as wilderness would not be permitted if they can be accomplished outside of the wilderness areas.

Research and other studies must be conducted without use of motorized or mechanized equipment or construction of temporary or permanent structures. Exceptions may be approved for projects that are essential to managing the specific wilderness areas when no other feasible alternatives exist. Such use must be necessary to meet the minimum requirements for administration of the area as wilderness and must not degrade wilderness character. A site-specific NEPA analysis would have to be prepared for the authorization of any exceptions.

### ***Livestock Grazing***

Grazing would continue within the three wilderness areas under federal regulations to meet the Mojave – Southern Great Basin Resource Advisory Council Standards.

The seven existing range developments within the Big Rocks and South Pahroc Range Wilderness Areas would be kept and maintained. These developments would be evaluated when there is a grazing permit transfer and may be removed if deemed unnecessary by the BLM and permittee.

Routine livestock management and infrastructure inspections would be accomplished by foot or horseback as needed. Motorized vehicles may be authorized for major maintenance when transporting equipment or parts which cannot be accomplished by foot or pack stock. The Twin Springs water development in the South Pahroc Range would be the only infrastructure that may require motorized access for major maintenance. Motorized access to the Twin Springs water development may be permitted with written notification to the Field Manager. This maintenance may include the use of a four-wheel drive vehicle and backhoe for a maximum of 12 hours. The existing two-track route accessing the development would be gated outside the wilderness boundary and not rehabilitated. This would be the only route permitted for motorized or mechanized access to the Twin Springs Development.

In the case of an emergency such as rescuing sick animals or placement of feed in all three wilderness areas, the permittee is authorized to use motor vehicles. This would be stated as a term or condition of the grazing permit.

### ***Water rights***

The BLM would seek to acquire additional water rights within the wilderness areas under Nevada state water law. Existing water rights may be purchased from willing sellers or shared with other agencies through cooperative agreements. The BLM may also file application for additional water rights where water in excess of existing permitted rights can be shown to exist. Water rights would only be used to sustain riparian habitat, provide water to wildlife or support recreation.

### ***Mine Claims***

There are four mine claims along the eastern boundary of the South Pahroc Range Wilderness. Validity exams on identified claims would be conducted where necessary according to wilderness management regulations.

### ***Military Operations***

Proposals for training exercises by the military would not be located within the three wilderness areas. The BLM would work with military representatives to determine appropriate locations outside of wilderness for any training exercise.

In the case of a dropped object such as live ordinance, flares, aircraft parts or downed aircraft, the following guidelines would be followed:

- A Wilderness Specialist would be dispatched to all incidents occurring in or threatening wilderness.
- Use of any motorized equipment must be approved by the Field Manager.
- Heavy equipment (bulldozers, etc.) would only be used in wilderness if the incident is threatening human life, property or wilderness characteristics. The Field Manager must approve the use of heavy equipment in all cases.
- Helibases and helispots within wilderness must be approved by the Field Manager; the use of helibases and helispots should meet the minimum required tool objective.
- Helicopters or other aircraft may be used for aerial reconnaissance work.
- Sling loading materials into or out of wilderness using a helicopter must be approved by the Field Manager and should meet the minimum required tool objective.
- Staging areas and camps requiring motorized access would be located outside of wilderness unless authorized by the Field Manager.

- Staging areas and camps that only require non-motorized access may be located in wilderness areas if authorized by the Resource Advisor.
- The Ely Field Office Noxious Weed Prevention schedule which identifies best management practices would be utilized. Suppression resources would be inspected and washed to prevent the spread of noxious weeds. Wash-down sites would be recorded using a GPS unit if possible and reported to the Ely Field Office Weeds Coordinator. Camps and other assembly points would not be located in noxious weed infestation areas.
- Leave No Trace principles would be used in wilderness areas. All evidence of human activity should be removed to the maximum extent possible.
- Notifications required for the above actions shall be via email/faxed memo from 99 CES/CC to the Ely Field Manager. Actions may be verbally approved with follow up written request/approval within 72 hours.

#### ***Structures, Installations and Other Human Effects or Disturbances***

Structures and installations may be removed if they are not the minimum necessary for administration of the area as wilderness, or are not associated with a grandfathered use or valid existing right.

The seismic monitoring station within the South Pahroc Range Wilderness would be kept and maintained. The station was in place for over 20 years prior to the areas designation as wilderness. Access to the monitoring station would remain non-motorized and non-mechanized.

Wilderness staff and volunteer monitors would be given instructions on the identification of human effects that would be considered unattended personal property or refuse. Unattended personal property not associated with an active camp, including geocaches, would be removed by BLM personnel upon encountering it and temporarily held at the BLM Ely Field Office or Caliente Field Station. If possible, the owner of the personal property would be contacted. In the case of a geocache, the BLM would also request that the geocache or virtual geocache sponsor remove the site listing from the internet. Human effects for which questions of age exist would be photographed for further consideration by the archaeologist. Prehistoric artifacts would not be disrupted.

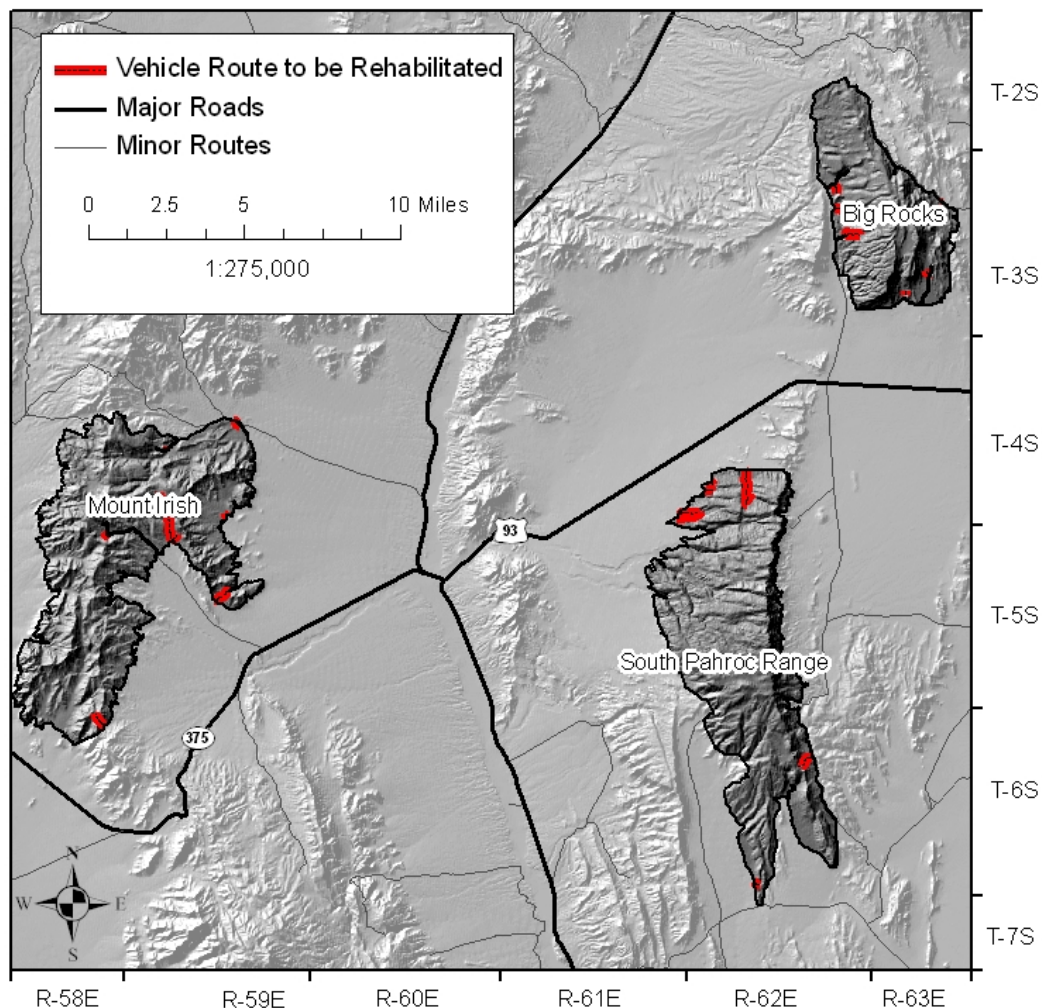
#### ***Rehabilitation of Illegal Motorized Routes***

There are approximately 6.5 miles of unauthorized motorized vehicle routes throughout the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas that are largely denuded of vegetation, though some vegetation may occur along the center hump of the route. Soils in the routes are compacted and subject to increased erosion. These routes, as well as any future motorized trespasses, are identified for rehabilitation using one or a combination of the following methods: decompaction, scarifying, recontouring, vertical mulching, erosion control, permion and vegetative restoration with native species and



seed mixes. These routes would be monitored for future unauthorized motorized traffic and may require repeat rehabilitation. Artificial barriers may be placed outside of wilderness boundaries for protection of rehabilitation actions, or as an alternative to unsuccessful rehabilitation measures. Placement of these barriers would occur outside of the wilderness boundaries.

**EA Map 11. Illegal Routes to be Rehabilitated**



**Note on Map 11:** For detailed maps showing illegal routes to be rehabilitated in each individual wilderness area, please refer to Maps 2, 3 and 4 near the beginning of this Environmental Assessment.

Work would be completed by BLM staff and contractors with the assistance of volunteer hand crews. All actions in wilderness would be conducted with non-motorized equipment and non-mechanized transport. Actions would include and generally be conducted in the following order as needed:



*Illegal Route in the Mount Irish Wilderness*

**Decompaction:** Working the top few inches of the entire disturbed surface to relieve soil compaction. This action would be completed with the use of non-motorized hand tools (soil spades, spading forks, McCloud rakes, pulaskis, shovels, horse-drawn implements, etc.).

**Scarifying/Pitting:** Loosening and texturizing the impacted, disturbed surface in random locations to better capture water, organic debris and wind-blown seeds, thereby stimulating natural revegetation. This would be done with non-motorized hand tools.

**Recontouring:** Reconfiguring/shaping the route to blend it with the adjacent, relatively undisturbed desert. This would involve the creation of small hummocks and banks, where appropriate, to mimic the surrounding landscape. Berms would be pulled in and the soil distributed across the disturbed surface. Vehicle tracks in sandy washes would be raked. This would lessen visual contrasts and provide a surface for natural revegetation. This action would be completed with non-motorized hand tools.

**Vertical Mulching:** Dead and down vegetation is "planted" to obscure the visible portions of the disturbance. Additional dead vegetation, rock material and other organic matter may be distributed over the worked surface to decrease visual contrasts, create sheltered sites to aid in natural revegetation and add organic debris. Dead and down vegetation and other materials would be gathered from areas near to the disturbances by hand.

**Erosion Control:** Placing sterile, weed-free straw bales or creating light terracing/berms to reduce erosion and create barriers to vehicles on steep slopes. This is especially effective on hill climbs. The straw bales break down over time and provide additional organic debris to the reclamation site. Bales would be brought in by hand or horseback to the worksite.

Permion (desert varnish colorant): Spraying disturbed rock surfaces to simulate the coloration of the surrounding desert varnish. Permion is a chemical compound comprised of manganese, salts and other ingredients used to simulate the natural desert varnish that occurs on rock surfaces in arid environments. Permion would be applied sparingly with the use of a backpack sprayer and only on disturbed rock surfaces that contrast sharply with the surrounding landscape.

Vegetative Restoration: This would involve planting, transplanting and/or seeding necessary to help stabilize soil, speed overall vegetative recovery and camouflage evidence of disturbances. All seed would be locally collected or native species scattered on reclaimed surfaces to accelerate natural revegetation. This action would be completed by non-motorized hand tools.

## **Alternative 2 (Human Activity Most Evident)**

Alternative 2 emphasizes decisions to accommodate increasing desire for recreational access. This alternative designates eleven short trails throughout all three wilderness areas to provide additional access and limit resource impacts. It minimizes potential regulations on visitor use to provide for more unconfined recreational opportunities. For example, geocaching would be allowed to occur under site-specific stipulations. This alternative also allows a greater variety of commercial guide and outfitter operations, including trail rides and heritage tourism. This alternative would also allow for some rehabilitation of future illegal motorized routes within the three areas for the enhancement of the wilderness quality of naturalness.

The following actions would not vary from the proposed action: Noxious and Invasive Weeds, Wildlife Management Activities, Fire Management, Emergency Stabilization and Rehabilitation, Archaeological Resources and Historic Properties, Management of General Recreation Activities, Commercial Pine Nut Harvest Restrictions, Vehicle Access and Staging Areas, Research, Livestock Grazing, Water Rights, Mine Claims, and Military Operations.

The following actions would vary from the proposed action:

### ***Trails***

The following existing trails would be designated and converted to hiking and equestrian trails and displayed on all BLM maps:

In the Big Rocks Wilderness:

- Mecca Trail
- Little Boulder Trail

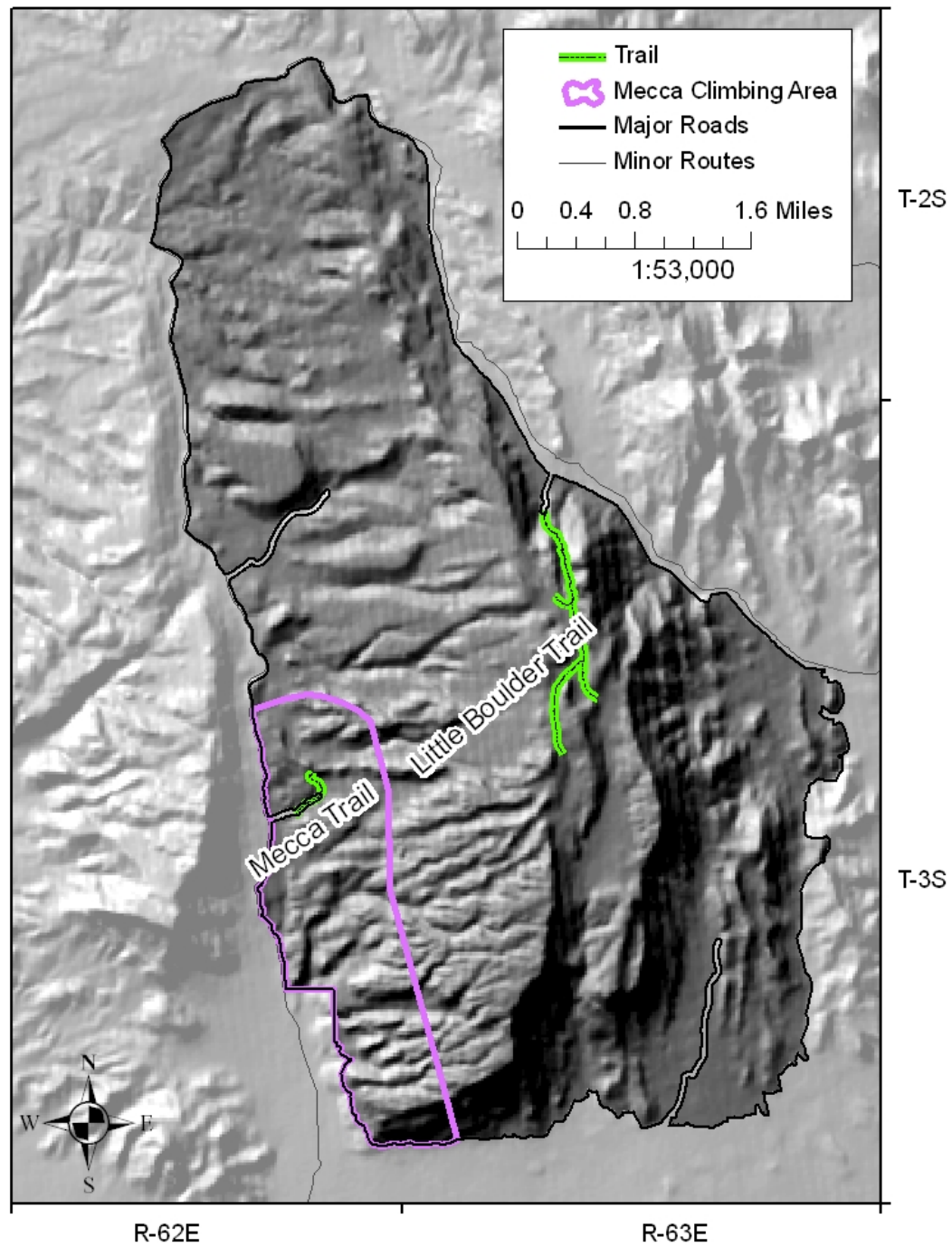
In the Mount Irish Wilderness:

- Logan Creek Trail
- Unnamed Wash Trail
- Southeast Saddle Trail

In the South Pahroc Range Wilderness:

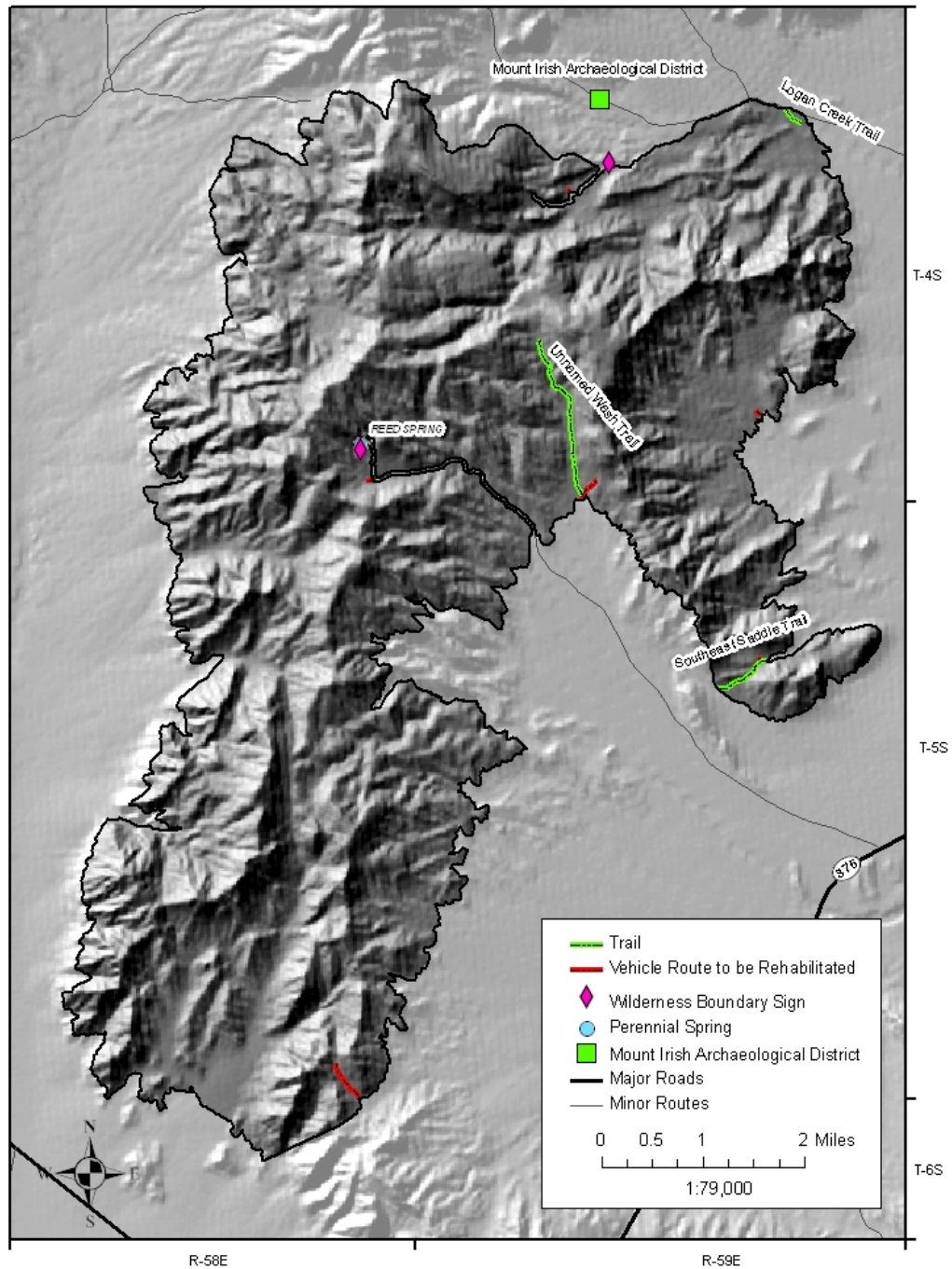
- There are seven unnamed existing trails accessing all sides of the wilderness

EA Map 12. Alternative Trails in the Big Rocks Wilderness

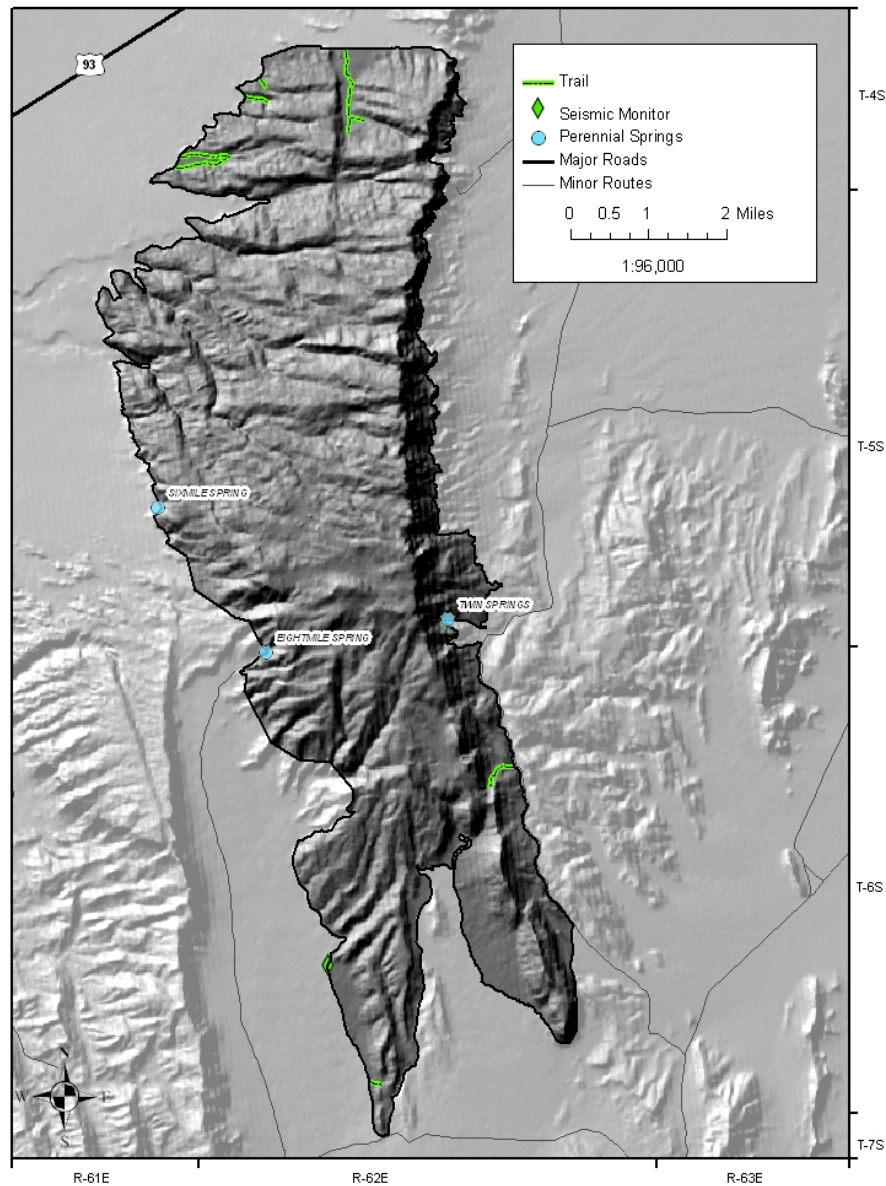




EA Map 13. Alternative Trails in the Mount Irish Wilderness



**EA Map 14. Alternative Trails in the South Pahroc Range Wilderness**



If not designated as a trail, or retained as a foot-worn hiking path, any new trails would be rehabilitated.

Designated trails would total approximately 1.75 miles in the Big Rocks Wilderness, three miles in the Mount Irish Wilderness, and 3.5 miles in the South Pahroc Range Wilderness. A cultural inventory of the trails would be completed. The Mecca Trail is approximately one mile in length and the main access into the Big Rocks boulder fields within the designated wilderness. The Mecca Trail is currently a two-track route and would be converted to a single-track trail. The Little Boulder Trail is an existing single-track trail that begins at Little Boulder Spring and accesses the upper plateau of the



wilderness. The Little Boulder Trail would require a short reroute of approximately 0.75 miles to minimize impacts to grazing operations and wildlife use of water associated with Little Boulder Spring. The trail reroute would leave from below the existing corral outside the wilderness and follow the wash to the intersection with the existing trail. The three trails in the Mount Irish Wilderness and the seven trails in the South Pahroc Range Wilderness are currently two-track routes. Foot-worn hiking paths may occur and may be available for use upon discovery by visitors. These informal foot-worn hiking paths would not be marked on the ground, displayed on BLM maps or brochures, or normally receive maintenance.

No known foot-worn hiking paths occur within the three wilderness areas. Monitoring for new foot-worn hiking paths would specifically occur at the Mecca area of the Big Rocks Wilderness, the southern drainage of the South Pahroc Range Wilderness, all vehicle access points and those unauthorized motorized routes closed at the time of wilderness designation. An inventory of new foot-worn hiking paths would be maintained and monitored for resource damage. Monitoring would identify paths with different levels of trampling, leading to primitive camping areas, cut vegetation or other evidence of use.

As new foot-worn paths are discovered, they would be evaluated for impacts to wilderness character (including archeological and biological resources) and the management objectives of this plan. When appropriate and where possible, new foot-worn hiking paths would be rehabilitated (see guidelines for rehabilitation of disturbances later in this section) or retained. When a foot-worn hiking path is retained, it may be rerouted, improved or maintained to follow designated trail guidelines to make the trail compatible with protecting resources while preserving the wilderness character of the area.

Both designated trails and, when determined appropriate, informal foot-worn paths may be maintained or rerouted where they are causing or anticipated to cause damage to wilderness character. Examples for when trail maintenance or rerouting would occur include:

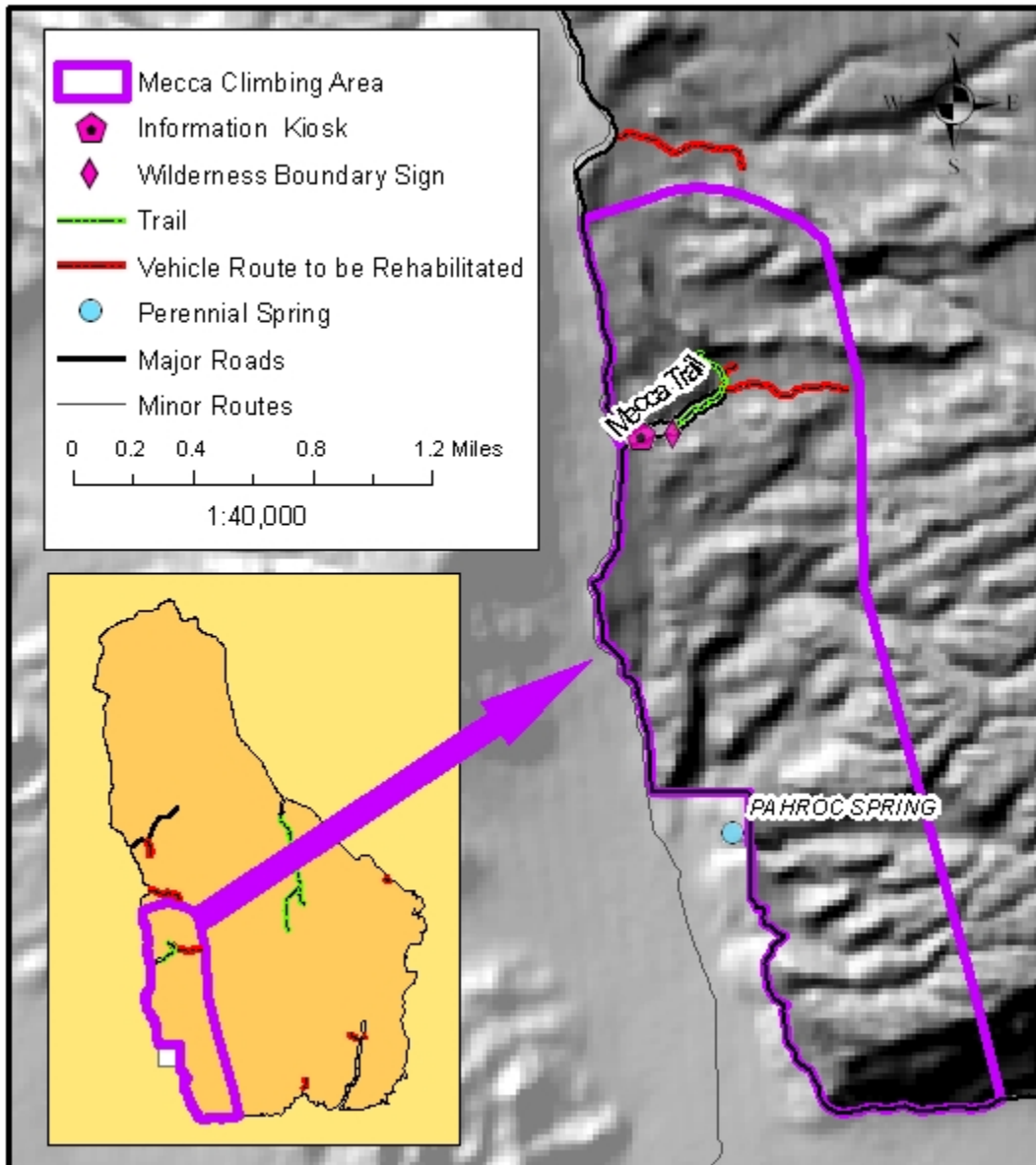
- Slopes greater than 15 percent, beyond which potential for excessive soil erosion and trail deterioration is high. Very short, steep sections may be retained where reinforcement with native rock would prevent soil erosion. Rolling dips or rock-enforced water bars would be utilized to reduce water caused soil erosion.
- Where trail braiding or duplicate routes exist or are beginning to occur, the most appropriate trail would be selected by improving its tread surface or trimming back vegetation. The alternate trail(s) would be obstructed and rehabilitated with rock or native vegetation
- Maintenance would strive to limit trail width to 24 inches, and not exceed 36 inches except trail sections along precipices (where it may be wider for safety) or in washes. Width standards are applied to continuous segments longer than 50 feet. Tree limbs or fallen trees may be cleared within ten feet high and four feet

- to either side of trail (cutting limbs at trunk) or, where practical, minor trail relocation to avoid the tree.
- Trails may be rerouted to avoid damage to natural or cultural resources.

***Manage Bouldering (climbing on small rock formations)***

Bouldering would be permitted in these wilderness areas, and for the most part, is likely to occur only in the Mecca area of the Big Rocks Wilderness.

**EA Map 15. The Mecca Climbing Area**



Damaging practices, including chiseling or chipping rock, forcibly prying off rock, gluing or otherwise affixing artificial holds on rock, would be prohibited. These prohibitions

would be indicated on information kiosks for the area, BLM brochures and on the BLM website. Destroying vegetation and other natural resources would be discouraged through the same media as above.

It is likely that some foot-worn hiking paths connecting various boulders and other climbing-related surface disturbances would occur. This area would be specifically monitored for new foot-worn paths, disturbances and subsequent resource impacts. Foot-worn paths resulting from bouldering activities would be managed according to the above discussion. In addition, there is increased potential for trampling of soil and vegetation around boulders and staging areas. A staging area would be designated outside the Big Rocks Wilderness as described in the Proposed Action.

### ***Camping***

Camping would be allowed except within 300 feet of sole source springs or water troughs, according to state law. Campfires would be allowed except under regional fire danger restrictions. Low impact camping techniques would be encouraged. Camping would not be allowed for more than 14 days in one location.

### ***Signs***

The wilderness boundary would be signed at key access locations and at approximately one-mile intervals along boundary roads. Signboards would be placed at vehicle access points and trailheads. Large information kiosks would be placed at the Mecca staging area, in the vicinity of the junction of Highway 93 and state routes 318 and 375 and at Oak Spring summit east of the wilderness areas.

Directional trail markers would be installed on all designated trails in the three areas, but would not be installed on foot-worn hiking paths that are retained and maintained by the BLM.

### ***Solitude***

No management actions or restrictions to maintain opportunities for solitude would be enacted under this alternative.

### ***Guides and Outfitters***

Commercial guides and outfitters would be permitted for a variety of recreational and touring purposes including hunting, guided trail rides or hikes, and heritage tourism.

All permitted guides would be subject to the same 14-day camping limitation as other visitors to the wilderness. Limits on the number of commercial guides in wilderness may be implemented if monitoring identifies excessive impacts to wilderness character or other natural or cultural resources.

### ***Off-site Information***

The BLM would promote and advertise recreational opportunities available in the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas. Information about the wilderness areas (for example, safety, Leave No Trace, sensitive resources and some

location information) would be provided in brochures, on the BLM website and on BLM Surface Management Edition maps. In addition, wilderness-specific maps would be produced with the designated trails, descriptions and interpretive information. Wilderness ethics and Leave No Trace principles would be included on maps.

The BLM would also coordinate with the U.S. Geological Survey to include wilderness boundaries on new USGS map printings and remove from future USGS map printings vehicle routes depicted within wilderness boundaries. In addition, the BLM would work with private map producers to include wilderness boundaries, trails and staging areas.

Information on these wilderness areas may also be made available by non-BLM sources such as guide books.

### ***Structures, Installations and Other Human Effects or Disturbances***

The seismic monitoring station within the South Pahroc Range Wilderness would be kept and maintained. Access to the monitoring station would remain non-motorized and non-mechanized.

Unattended personal property not associated with an active camp may be removed by BLM personnel after 14 days.

Casual geocaching would be allowed through a letter of agreement with special stipulations to prevent damage to the wilderness resource. A separate environmental assessment would be prepared for each letter of agreement. Development of foot-worn hiking paths to and around the geocache or degradation of the wilderness character would be monitored. Should development of a foot-worn hiking path begin, or other resource damages occur, the letter of agreement would be revoked and the geocache removed. "Virtual" geocaching (no physical cache is present) may occur without a letter of agreement, but if site monitoring indicated development of foot-worn hiking paths, degradation of the wilderness character or damage to other resources, the geocache sponsor would be requested to remove any site postings from the internet.

### ***Rehabilitation of Illegal Motorized Routes***

Sections of motorized routes visible from points outside the wilderness that have been rehabilitated would be monitored and maintenance of the rehabilitation completed as necessary while the remaining section not visible would be left to rehabilitate naturally. This would be accomplished to minimize future motorized trespasses on these routes.

Work would be completed by BLM staff and contractors with the assistance of volunteer hand crews. All actions in wilderness would be conducted with non-motorized equipment and non-mechanized transport. Actions would include and generally be conducted in the following order as needed:

Decompaction: Working the top few inches of the entire disturbed surface to relieve soil compaction. This action would be completed with the use of non-

motorized hand tools (soil spades, spading forks, McCloud rakes, pulaskis, shovels, horse-drawn implements, etc.).

**Scarifying/Pitting:** Loosening and texturizing the impacted, disturbed surface in random locations to better capture water, organic debris and wind-blown seeds, thereby stimulating natural revegetation. This would be done with non-motorized hand tools.

**Recontouring:** Reconfiguring/shaping the route to blend it with the adjacent relatively undisturbed desert. This would involve the creation of small hummocks and banks, where appropriate, to mimic the surrounding landscape. Berms would be pulled in and the soil distributed across the disturbed surface. Vehicle tracks in sandy washes would be raked. This would lessen visual contrasts and provide a surface for natural revegetation. This action would be completed with non-motorized hand tools.

**Vertical Mulching:** Dead and down vegetation is "planted" to obscure the visible portions of the disturbance. Additional dead vegetation, rock material and other organic matter may be distributed over the worked surface to decrease visual contrasts, create sheltered sites to aid in natural revegetation and add organic debris. Dead and down vegetation and other materials would be gathered from areas near to the disturbances by hand.

**Erosion Control:** Placing sterile, weed-free straw bales or creating light terracing/berms to reduce erosion and create barriers to vehicles on steep slopes. This is especially effective on hill climbs. The straw bales break down over time and provide additional organic debris to the reclamation site. Bales would be brought in by hand or horseback to the worksite.

**Permion (desert varnish colorant):** Spraying disturbed rock surfaces to simulate the coloration of the surrounding desert varnish. Permion is a chemical compound comprised of manganese, salts and other ingredients used to simulate the natural desert varnish that occurs on rock surfaces in arid environments. Permion would be applied sparingly with the use of a backpack sprayer and only on disturbed rock surfaces that contrast sharply with the surrounding landscape.

**Vegetative Restoration:** This would involve planting, transplanting and/or seeding necessary to help stabilize soil, speed overall vegetative recovery and camouflage evidence of disturbances. All seed would be locally collected or native species scattered on reclaimed surfaces to accelerate natural revegetation. This action would be completed by non-motorized hand tools. Seeding or planting live vegetation may be utilized. Native species would be used exclusively, particularly local genetic stocks whenever possible, and would be designed to mimic the local species diversity.

## **Alternative 3 (No Action)**

The No Action alternative is presented as a baseline of management action items for comparison of impacts with the Proposed Action. It represents management of the three wilderness areas that would occur without preparing a specific wilderness plan.

### ***Noxious and Invasive Weeds***

Noxious weeds are treated on a case-by-case basis as per the District Noxious Weed plan. The BLM's noxious weed classification system is consulted in setting priorities for weed control.

### ***Wildlife Relocation***

Wildlife removal, reintroduction or augmentation may be approved on a case-by-case basis according to existing policy to restore the population of an indigenous species eliminated or reduced by human influence.

### ***Wildlife Water Developments***

No wildlife water developments currently exist in these wilderness areas. Establishment of new wildlife water developments may be approved when essential to preserve the wilderness resource and to correct unnatural conditions resulting from human influence. Developments must promote healthy, viable and more naturally-distributed wildlife populations, and have minimal visual impact.

### ***Fire Management***

Fire Management in the Big Rocks Wilderness, Mount Irish Wilderness and South Pahroc Range Wilderness would be conducted in accordance with the Ely Field Office Fire Management Plan (BLM 2004). In the North Pahroc and Pahrnagat Fire Management Unit (FMU), including the Big Rocks Wilderness and the Mount Irish Wilderness, 90 percent of individual fires should be held to 300 acres or less and no more than 10,000 acres burned in a ten year period. In the Clover, Delamar, South Pahroc, Irish FMU, including the South Pahroc Range Wilderness, 90 percent of individual fires would be held to 1,000 acres or less and no more than 50,000 acres burned in a ten year period.

Fire suppression measures and techniques must be used which achieve wilderness management objectives with the minimum adverse impact on the wilderness resources. Methods and equipment which least alter the landscape or disturb the land surfaces are best. Structures and improvements must be located outside the wilderness boundary, except those that are minimum necessary to achieve wilderness management objectives. Temporary fire camps, helispots and other sites used for fire suppression or control activities must be removed upon completion of use and the site rehabilitated to as natural a state as possible.

### ***Emergency Stabilization and Rehabilitation***

Rehabilitation would be applied to restore visual character and native plant productivity to mimic the local species diversity.

### ***Trails***

No trails would be designated or constructed. Approximately 8.5 miles of existing former vehicle trails – 1.75 miles in the Big Rocks Wilderness, three miles in the Mount Irish Wilderness, and 3.5 miles in the South Pahroc Range Wilderness – would be treated as foot-worn hiking paths. Cattle or game trails would also be treated as foot-worn paths. These paths may be available for use by visitors who come across them, but they would not be displayed or described on BLM maps or brochures.

### ***Camping***

Camping is allowed except within 300 feet of springs or water troughs according to state law. Campfires are allowed except under regional fire danger restrictions. Low impact camping techniques are encouraged. Camping is not allowed for more than 14 days in one location.

### ***Signs***

The wilderness boundary is signed at key access locations and at approximately one-mile intervals along boundary roads. Signs would be maintained through routine boundary monitoring.

### ***Solitude***

No management actions would be taken to maintain opportunities for solitude.

### ***Vehicle Access and Staging Areas***

No trailheads or vehicle access routes would be designated or defined. Vehicle access to the Big Rocks Wilderness would be anywhere along two boundary roads as well as five distinct points. Vehicle access to the Mount Irish Wilderness would be anywhere along one boundary road as well as eight distinct points. Vehicle access to the South Pahroc Range Wilderness would be anywhere along four boundary roads and ten distinct points.

### ***Off-site Information***

Information about the wilderness areas would be presented in brochures, on the BLM website and fact sheets/maps for each area. Information on these wilderness areas may also be made available by non-BLM sources such as guide books.

### ***Research and Monitoring***

Research, inventory, and monitoring of natural, cultural and recreational conditions may occur on a case-by-case basis when compatible with protecting wilderness resources.

### ***Livestock Grazing***

Grazing would continue within the three wilderness areas under the Mojave – Southern Great Basin Resource Advisory Council Standards and Guidelines.

Routine livestock management and infrastructure inspections would be accomplished by foot or horseback as needed. Motorized vehicles may be authorized for major maintenance when transporting equipment or parts which cannot be accomplished by foot



or pack stock. In the case of an emergency, the permittee would be authorized to use motor vehicles. These conditions would be stated as a term or condition of the grazing permit.

### ***Water Rights***

The BLM would seek to acquire additional water rights within the wilderness areas under Nevada state water law. Existing water rights may be purchased from willing sellers or shared with other agencies through cooperative agreements. The BLM may also file application for water rights where water in excess of existing permitted rights can be shown to exist. Water rights would only be used to sustain riparian habitat and general watershed health.

### ***Mine Claims***

There are four mine claims along the eastern boundary of the South Pahroc Range Wilderness. Validity exams on identified claims would be conducted where necessary according to wilderness management regulations.

### ***Structures, Installations and Other Human Effects or Disturbances***

The seven existing range developments within the Big Rocks and South Pahroc Range Wilderness Areas would be kept and maintained. The seismic monitoring station within the South Pahroc Range Wilderness would be kept and maintained. Access to the monitoring station would remain non-motorized and non-mechanized.

Unattended personal property not associated with an active camp, including geocaches, would be removed by BLM personnel upon encountering it and temporarily held at the BLM Ely Field Office or Caliente Field Station. In the case of a geocache, the BLM would also request that the geocache or virtual geocache sponsor remove the site listing from the internet.

### ***Rehabilitation of Illegal Motorized Routes***

Fifteen miles of preexisting motorized routes have been reclaimed in the three wilderness areas. The reclamation may be successful if the routes are not used by visitors.

Seeding or planting live vegetation may be utilized. Native species would be used exclusively, particularly local genetic stocks whenever possible, and would be designed to mimic the local species diversity.

### ***Private Property***

Unattended personal property may be removed by BLM personnel after 14 days.

### ***Private Land***

No private land in-holdings exist. Acquisition of the 40-acre private parcel at Pahroc Spring would not be pursued.

## Affected Environment

The three wilderness areas covered by the proposed action are located in Lincoln County in the Great Basin and Mojave Transition ecoregion. The critical elements of the human environment, as identified by the BLM Manual 1790-1, are listed in the following table. Elements that may be affected are further described in this Environmental Assessment. Rationales for those elements that would not be adversely affected are also listed in the following table. These critical elements would not be considered further in this document.

**Table 1: Critical Elements of the Human Environment and Rationale for Detailed Analysis for the Proposed Action**

Critical Element	No Effect	May Affect	Not Present	Rationale
Air Quality	X			Activities proposed within the three wilderness areas would not create increases in air pollutant concentrations.
Areas of Critical Environmental Concern			X	Resource is not present.
Cultural Resources		X		Proposed Action may enhance preservation of cultural resources.
Environmental Justice	X			No minority or low-income groups would be affected by disproportionately high and adverse health or environmental effects.
Farm Lands (prime or unique)			X	Resource is not present.
Flood Plains			X	Resource is not present.
Migratory Birds		X		No disturbances would occur between May and July 15.
Native American Religious Concerns	X			There are no known issues of concern to local tribes.
Non-Native, Invasive Species		X		Surface disturbances for route rehabilitation may increase risk of non-native, invasive species establishment. Control measures may reduce noxious species.
Threatened and Endangered Species			X	No threatened or endangered species occur in

				the planning area.
Special Status Species		X		Designation of trails, trailheads and access points may impact some individual animals.
Wastes (hazardous or solid)			X	No wastes would be generated by the Proposed Action.
Water Quality (drinking)	X			Drinking water sources would not be encountered.
Water Quality (ground)	X			Ground water sources would not be encountered.
Wetlands/Riparian		X		Control measures on Tamarisk may enhance riparian areas.
Wild Horses and Burros			X	Resource is not present.
Wild and Scenic Rivers			X	Resource is not present.
Wilderness		X		Proposed actions are for the management of wilderness areas.

In addition to the Critical Elements of the Human Environment, the BLM considers other resources that occur on public lands, or issues that may result from the implementation of the Proposed Action. The potential resources, uses and issues that may be affected are listed in Table 2. A brief rationale for either considering or not considering the issue or resource further is provided. The resources and issues that are considered in the Environmental Assessment are described in the Affected Environment section of this document and are analyzed in the Environmental Consequences section.

**Table 2: Other Resources and Issues, and Rationale for Detailed Analysis for the Proposed Wilderness Management Plan**

Resource or Issue	No Effect	May Affect	Not Present	Rationale
Vegetation		X		Access point work and route rehabilitation would affect small areas of vegetation.
Wildlife		X		Designation of trails, trailheads and access points may impact some individual animals.
Livestock Grazing/Range		X		Visitor use may disturb livestock movement.
Fire Management		X		Wildland fire may be managed differently within wilderness than outside.
Recreation		X		Potential for additional

				regulations may affect recreational use of these areas.
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### ***Noxious and Invasive Weeds***

Cheatgrass and red brome are non-native annual grasses present throughout the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas. These annual invasive grasses are widely adapted and grow on all exposures and all types of topography. They are adapted to soil associations present in the three wilderness areas and thrive where there is weak competition from native perennial and annual plants. They often become dominant following disturbances such as fire. When occurring at high density, they may alter the natural fire regime to increased fire intensity, rate of spread and shorter fire return intervals than native plants are adapted to.

A risk assessment for noxious weeds was conducted for the three wilderness areas. For this project, the risk factor is low. The areas are partially within the BLM weed surveyed area. Some additional field reconnaissance was conducted as well as consulting noxious weed maps.

A risk factor of low means noxious weed species are present in areas adjacent to but not within the project area. Activities can be implemented and prevent the spread of noxious weeds into the areas.

Tamarisk is known to occur in proximity to Twin Springs, Sixmile Spring, and Eightmile Spring in the South Pahroc Range Wilderness Area. Tall Whitetop is known to occur in Little Boulder Wash of the Big Rocks Wilderness. Spotted Knapweed, Hoary Cress and Russian Knapweed have been recorded in proximity to all three wilderness areas.

### ***Vegetation***

The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas are located within the Mojave transition and Great Basin ecoregions. Predominant vegetation communities across the three wilderness areas include Great Basin pinyon-juniper woodlands, Great Basin xeric mixed sagebrush shrubland and Intermountain Basins big sagebrush shrublands.

The pinyon-juniper woodland community occurs predominantly between 4,500 and 7,500 feet across all three areas. These communities are composed primarily of single leaf pinyon pine, Utah juniper with an understory of mixed sagebrush and perennial bunch grasses.



*The Mount Irish Wilderness*

The Great Basin xeric sagebrush shrubland is a mix of sagebrush species found on the alluvial fans, rolling hills and rocky saddles and ridges typically found between 4,000 and 7,000 feet in all three areas. These sites are often dry and exposed with shallow, rocky soils. Native perennial grasses and forbs are sparse. Joshua tree and banana yucca are common at this elevation in the South Pahroc Range and Big Rocks Wilderness Areas.

The Intermountain Basins big sagebrush shrublands are found in the deeper soils of the three areas. They are dominated by perennial grasses and forbs such as indian ricegrass and desert needlegrass, as well as large areas of mature big sagebrush mixed with black sagebrush, low sage, shadscale, ephedra and rubber rabbit brush.

Relic stands of the Rocky Mountain variety of ponderosa pine occurs in the higher elevation of the South Pahroc Range Wilderness and along the higher plateau of the Big Rocks Wilderness.

### ***Livestock Grazing***

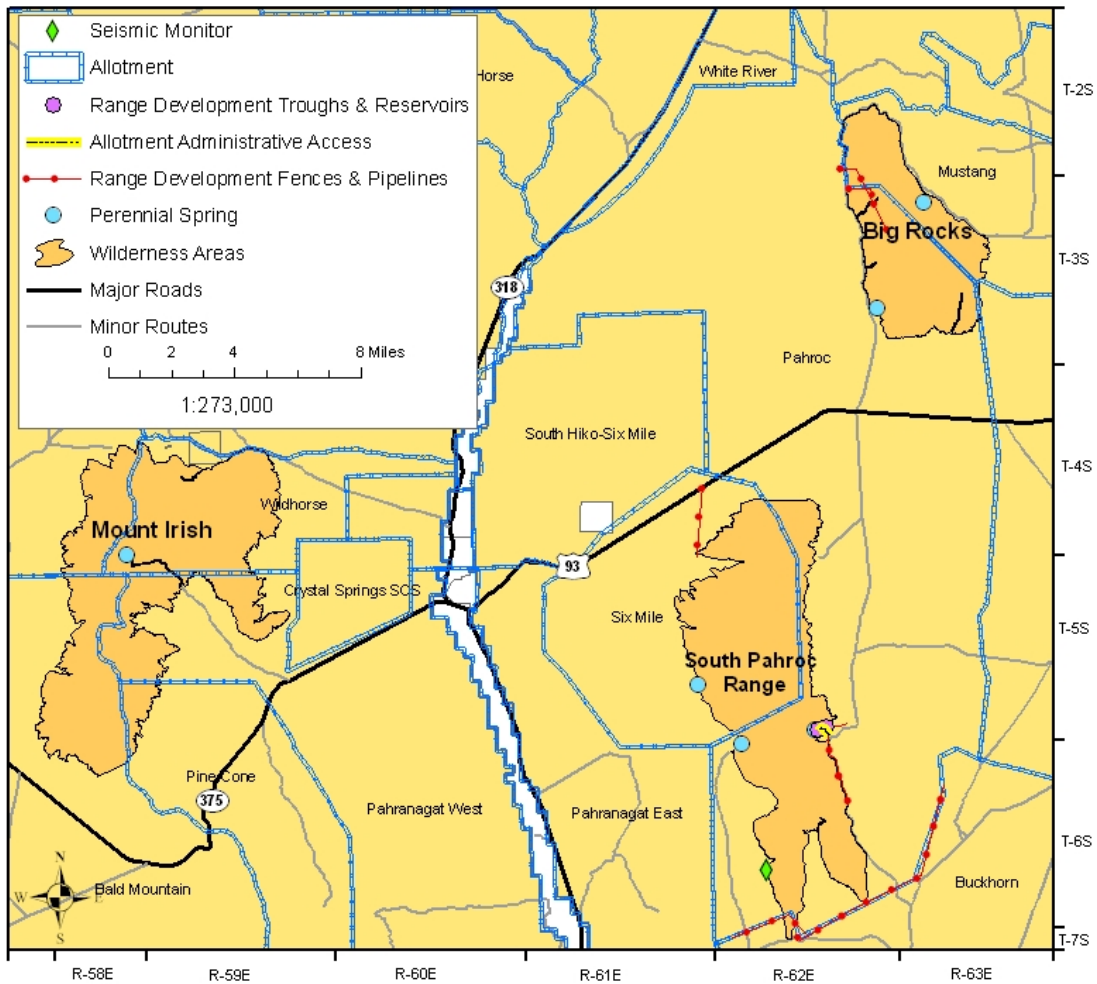
The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas are all open to livestock grazing.

Portions of the Mustang and Pahroc allotments are located within the Big Rocks Wilderness. Portions of the Wildhorse, Crescent N-4, Pahrangat West, Pine Cone and Bald Mountain Allotments occur within the Mount Irish Wilderness. Portions of the Six Mile, Pahroc and Buckhorn Allotments occur within the South Pahroc Range Wilderness.

All nine allotments listed above are classified as perennial. Grazing in all above-listed allotments is in accordance with federal regulations as identified on existing permits. The grazing permits are as follows for those allotments overlapping with wilderness boundaries:

Allotment	Livestock #	Grazing Period	AUMs
Mustang	95 cattle	03/01 to 02/28	1140
Pahroc	399 cattle	03/01 to 02/28	4788
Six Mile	72 cattle	03/01 to 02/28	864
Pine Cone	121 cattle	08/01 to 02/28	843
Crescent N-4	353 Sheep	10/01 to 02/28	350
Crescent N-4	50 cattle	03/01 to 02/28	600
Buckhorn	281 cattle	03/01 to 02/28	3372
Bald Mountain	480 cattle 5 horse	03/01 to 02/28	5760 60
Pahranagat West	28 cattle	10/01 to 05/31	224
Pahranagat West	119 cattle	10/01 to 05/31	951
Pahranagat West	61 cattle	10/01 to 02/28	303
Pahranagat West	61 cattle	03/01 to 05/31	185
Pahranagat West	61 cattle	10/01 to 02/28	303
Pahranagat West	61 cattle	03/01 to 05/31	185

**EA Map 16. Range Allotments**



Existing range developments within the wilderness areas include spring developments, pipelines and fences as shown in the table below. There are no existing range developments within the Mount Irish Wilderness.

Allotment	Development	Location	Description
Mustang	Mustang Spring Pipeline	Big Rocks	Water Pipeline
Mustang	Mustang Allotment Fence	Big Rocks	Fence
Six Mile	Gardner Valley Allotment Fence	South Pahroc Range	Allotment Fence
Pahroc	Twin Springs Trough	South Pahroc Range	Watering Trough
Pahroc	Twin Springs Reservoir	South Pahroc Range	
Pahroc	Twin Springs Pipeline	South Pahroc Range	Water Pipeline



Pahroc/Buckhorn	Alamo Canyon Fence	South Pahroc Range	Allotment Fence
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The grazing permittee is responsible for maintenance of all livestock grazing facilities in the wilderness areas by cooperative agreements. Although access by motor vehicles may occur on a case-by-case basis after contacting the BLM Ely Field Office, no scheduled access by motor vehicles for facility maintenance or livestock operations has been established.

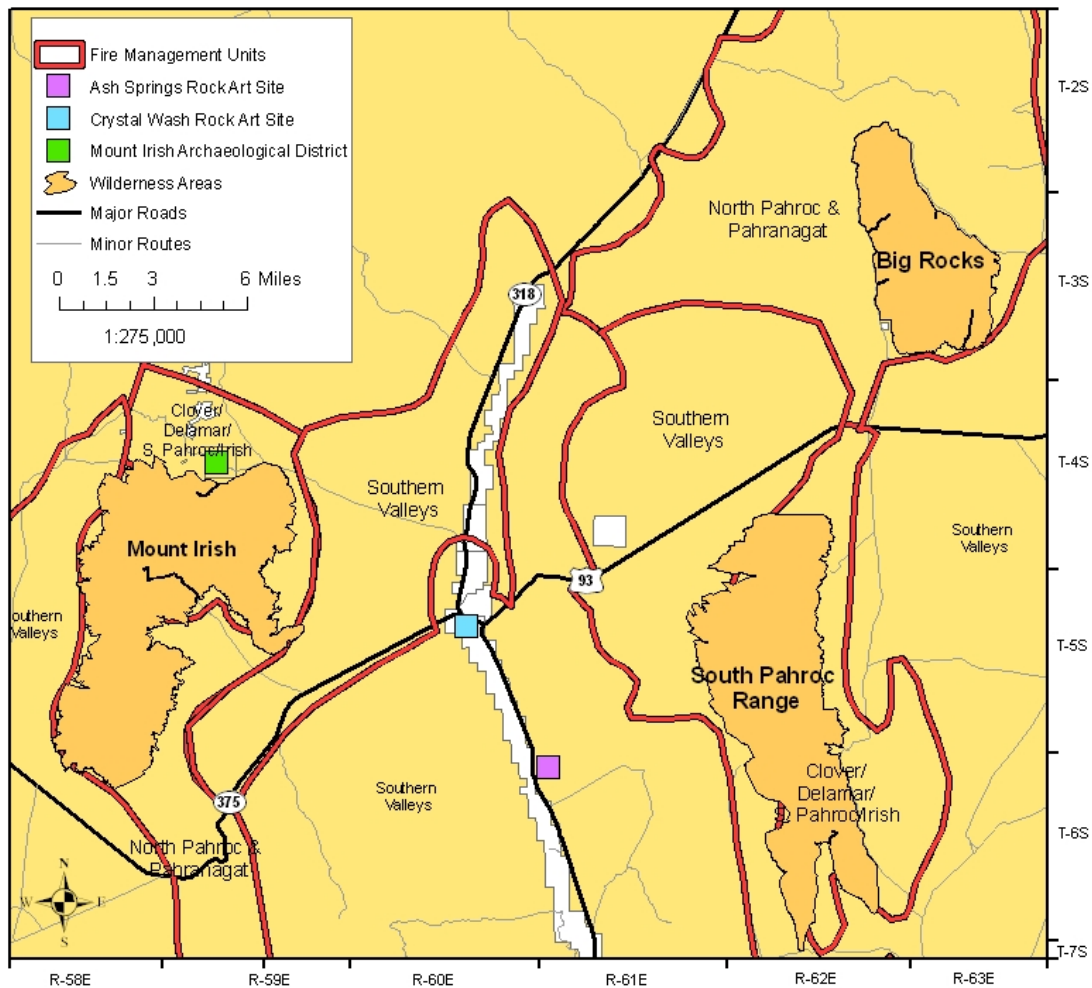
### ***Archaeological Resources and Historic Properties***

Archaeological resources are defined as any physical evidence of former human presence that is older than 100 years. Archaeological resources include prehistoric and historic period sites, features and artifacts which may range in complexity from a single stone tool or bottle fragment to a large prehistoric village or historic-period town site. Archaeological sites are the locations of past human activity, occupation or use, identifiable through inventory, historical documentation or oral history.

Archaeological Resource Inventories have been conducted within portions of all three wilderness areas, with an in-depth inventory only completed for the Big Rocks Wilderness. Site types that are known to occur within the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas include prehistoric rock art, artifact scatters, signs of historic mining and historic ranching.

Along the northern boundary of the Mount Irish Wilderness is the Mount Irish Archaeological District, where historic and prehistoric artifacts can be discovered and rock art panels abound. The Crystal Wash and Ash Springs Rock Art Sites are public sites located along Highway 93, west of the South Pahroc Range Wilderness and southeast of the Mount Irish Wilderness. The Crystal Wash Rock Art Site contains petroglyphs, pictographs and cupules, while the Ash Springs Rock Art Site contains only petroglyphs.

**EA Map 17. Archaeological District and Sites and Fire Management Units**



### ***Recreation***

Primitive and unconfined recreational opportunities are outstanding throughout all three wilderness areas because of their size, topography, scenery, diverse wildlife, varied vegetation and opportunities for solitude. Visitor use may occur year round, though snow and colder temperatures in the winter may limit some visitation. Actual visitor use is unknown at this time. Visitation has never been specifically monitored for in these areas.

Types of recreational use known to occur across all the areas include but are not limited to hunting, trapping, rock climbing, bouldering, heritage tourism, other types of sightseeing and hiking.

Overnight horse packing or backpacking is not known to occur in any of the three areas. The limited availability of water adds challenge to any overnight camping opportunities. Car camping is known to occur along the periphery of all three areas, particularly at vehicle access points to the wilderness areas. The greatest number of primitive campsites occur around the Big Rocks Wilderness. In addition, there are three miles of existing

trails in the Big Rocks Wilderness, 3.5 miles of existing trails in the Mount Irish Wilderness and 3.8 miles of existing trails in the South Pahroc Range Wilderness.

Current information in the form of maps and fact sheets on these wilderness areas is available from the BLM. Additional information has been published in field guides or posted on the internet. A majority of the privately posted information has been on the bouldering opportunities in the Mecca area of the Big Rocks Wilderness.

No permits are required to visit these areas, and there are no group size limits. The only commercial permits that have been issued to operate within these areas are hunting outfitter and guide permits which include the wilderness areas as part of a larger permitted region. No other commercial recreation permits have been issued to operate within the wilderness areas.

Off-highway vehicle use is an activity that occurs adjacent to the Big Rocks Wilderness. The Silver State Off-Highway Vehicle Trail forms the western boundary of the Big Rocks Wilderness. Both racing and casual motorized use occur on this trail. In addition, unauthorized motorized access has occurred in all three areas.

### ***Wilderness***

The Wilderness Management Plan addresses management of the 12,997-acre Big Rocks, 28,334-acre Mount Irish and 25,800-acre South Pahroc Range Wilderness Areas. Wilderness characteristics are described under five categories: untrammelled, naturalness and primeval character, undeveloped, outstanding opportunities for solitude or a primitive unconfined form of recreation and other features of scientific, educational, scenic or historical value.

These three areas have few trammeling activities. Trammeling activities include various measures in the management of wildland fire and weeds, and in the Big Rocks and South Pahroc Range Wilderness Areas, the presence of authorized allotment fences, pipelines and water troughs.

The naturalness and primeval character of the three areas is mostly preserved. Some changes to the native vegetation composition have occurred, including the introduction of the non-native annuals cheatgrass and red brome. Large wildfires occurred in both the Big Rocks and South Pahroc Range Wilderness Areas during the summer of 2006. Extensive acreage in both wilderness areas was burned during several different fires leaving no live vegetation. Most of the springs inside and adjacent to the wilderness areas have been developed as well. In addition, three miles of trails are present in the Big Rocks Wilderness, 3.5 miles in the Mount Irish Wilderness and 3.8 miles in the South Pahroc Range Wilderness, as well as a pre-existing seismic monitoring station just inside the southwest boundary of the South Pahroc Range Wilderness.

Outstanding opportunities for solitude and primitive, unconfined recreation are present in all three wilderness areas. The boulder fields and steep rocky ridgelines of the Big Rocks and South Pahroc Range Wilderness Areas in particular provide excellent opportunities

for solitude. The Big Rocks and South Pahroc Range Wilderness Areas provide outstanding recreation opportunities for bouldering, hiking, hunting, heritage tourism, exploration and camping throughout the entire area. The remote areas of the Mount Irish Wilderness provide outstanding opportunities to escape and explore, as well as to enjoy hunting, hiking, horseback riding, camping, nature study and photography. Only the 14-day stay limit for camping in all three areas confines recreational opportunities.

Other special features found in both the Big Rocks and South Pahroc Range Wilderness Areas include outstanding cultural resources and the presence of bighorn sheep. The South Pahroc Range Wilderness also has a relic stand of Ponderosa Pine. Special features found in Mount Irish include cultural resources; the Mount Irish Archaeological District is just to the north of the wilderness.

### ***Riparian or Wetlands***

No creeks are present, but approximately six springs have been recorded within or in close proximity to the three wilderness areas. Twin Springs is a perennial spring located within the South Pahroc Range Wilderness Area. Sixmile Spring and Eightmile Spring are large perennial springs located just outside the boundary of the South Pahroc Range Wilderness. Pahroc Spring and Little Boulder Spring are located just outside the boundary of the Big Rocks Wilderness. Reed Spring is located just outside the boundary of the Mount Irish Wilderness. All six of these springs have been developed for livestock use. All six of these springs also support limited riparian vegetation extending into the wilderness boundaries.

### ***Wildlife***

The remote location, steep terrain, varied vegetation and springs near the South Pahroc Range and Big Rocks Wilderness Areas support a variety of wildlife, including desert bighorn sheep. The mountain range and canyons of the Mount Irish Wilderness project out into the long sloping bajadas, providing important habitat for desert bighorn sheep and pronghorn antelope. No specific wildlife species inventories have been completed for these three areas, though wildlife observations include portions of the areas or nearby localities. Desert Tortoises have been sited near the South Pahroc Range Wilderness. There are no documented threatened and endangered species occurring in these areas, and no known BLM sensitive species occur in these areas.

No important wildlife use areas are known to occur in these areas. The Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas provide habitat for small mammals including desert cottontail rabbits, black tailed jackrabbits, the desert valley kangaroo mouse as well as a variety of bat species that may roost in the rocky terrain found throughout the three areas. No known bat surveys have been conducted within these areas. Mule deer can also be found in these areas. Predators such as coyotes, bobcats and mountain lions have been sighted or have left signs of their presence.

Springs in or near the Big Rocks and South Pahroc Range Wilderness Areas are known to support Great Basin spadefoot toads and are predicted to support red-spotted toads.

### ***Migratory Birds***

The variety of habitats within the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas support a wide range of bird species. Raptors that have been sited in proximity to the wilderness areas include red-tailed hawks, golden eagles and kestrels. Game birds include chukars, mourning doves and Gambel's quail.

### ***Special Status Species***

There are no known threatened and endangered species within the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas. In addition to federally and state listed species, the BLM manages sensitive species as if they are candidates for listing. Based on existing habitat and previously collected data, the following sensitive species may occur within the wilderness areas: Phainopeplas and loggerhead shrikes have been sited in close proximity to the three wilderness areas. The following bat species have been recorded in proximity to the three wilderness areas: California myotis, Long-legged myotis and western pipistrelle. Rock crevices in the cliff faces of the Pahroc Range, forested areas and springs throughout the wilderness areas are habitats these bats may occupy.

Desert bighorn sheep are known to occur in all three wilderness areas. Desert bighorn are a state-protected species. Typical desert bighorn sheep habitat consists of rough, rocky and steep terrain, broken by canyons and washes. Bighorn sheep require access to freestanding water during the summer months and throughout the year during drought conditions. The diet of desert bighorn sheep consists primarily of grasses, shrubs and forbs. Aerial surveys completed by the Nevada Department of Wildlife in September of 2004 in the Pahrangat and Mount Irish Range, which includes the Mount Irish Wilderness, led to a population estimate of 80 sheep for that area. Aerial surveys completed by the Nevada Department of Wildlife in September of 2005 for the Hiko, Pahroc and Delamar Ranges, which includes the Big Rocks and South Pahroc Range Wilderness Areas led to a population estimate of 130 sheep.

### ***Fire Management***

The three wilderness areas include two Fire Management Units (FMU's): the North Pahroc and Pahrangat FMU (NV-0040-17), including the Big Rocks Wilderness and the Mount Irish Wilderness, and the Clover, Delamar, South Pahroc, Irish FMU (NV-040-20), including the South Pahroc Range Wilderness.

Wildland fires have increased in frequency and intensity from the historical fire regime in these wilderness areas. There is an increased risk of losing key ecosystem components from increased fire impacts.

The fire season begins approximately in May and generally ends in October. The main cause of fire is lightning. Fires in these FMUs are wind-driven, and live fuel moisture plays a very small role in variability of fire size. Most lightning-caused fires are associated with monsoonal activity occurring in the summer months.

See EA Map 17 above.

# Environmental Consequences

## Assumptions for Analysis

The impact analysis is based on the following reasonable assumptions for the foreseeable future:

- A slow increase in visitation is expected to occur in the foreseeable future.
- Increased visitation would result in increased impacts to resources.
- Vehicle access to the three wilderness areas would remain unimproved.

## Alternative 1 (Proposed Action)

### *Noxious and Invasive Weeds*

The ability to detect invasive and non-native species would be enhanced over the No Action alternative through a greater emphasis on monitoring. Weed treatment procedures within the three wilderness areas would be clearly defined and compatible with limiting or eliminating noxious weeds. This may enhance the ability of the BLM to control, contain or eliminate certain noxious species within these areas. Rehabilitation of informal foot-worn paths would include methods such as decompaction, scarifying and pitting soil that may stimulate the growth of invasive annual grasses.

The continued presence and anticipated increase of recreational activities in the three wilderness areas, including camping, hiking, bouldering and horse packing, may contribute to the spread of invasive and non-native species as a result of trampling of native species and the possibility of carrying invasive and non-native seeds into the wilderness areas. The continued presence of livestock in the wilderness areas may also contribute to the spread of invasive and non-native species through trampling of vegetation and seed dispersal.

### *Vegetation*

Alternative 1 (the Proposed Action) provides rehabilitation of 6.5 miles of existing but closed trails in the Mount Irish and South Pahroc Range Wilderness Areas. In the Big Rocks Wilderness, 1.75 miles of designated trails would be maintained or rerouted to reduce degradation to vegetation. Informal foot-worn paths causing unacceptable resource damage as well as redundant campsites would be rehabilitated to prevent additional impacts to vegetation.





*Illegal Route in the Mount Irish Wilderness*

The continued use of the Big Rocks Wilderness for bouldering would result in informal foot-worn paths connecting and surrounding boulders used for climbing. Additionally, the use of crash pads for safety in bouldering landing zones would lead to the disturbance of vegetation around boulders, known as pad halos.

Vehicle turn-around areas would be constructed at motorized access points outside all three wilderness areas. Turn-around construction would result in the disturbance of no more than 0.5 acres per turn-around. This would result in 2.5 acres of disturbance at the Big Rocks Wilderness, four acres of disturbance at the Mount Irish Wilderness, and five acres of disturbance at the South Pahroc Range Wilderness. This would also focus impacts to these 11.5 acres and limit new impacts to vegetation at other locations. In addition, vehicle barriers would be constructed outside of wilderness to prevent vehicles from cross-country travel inside the wilderness. This action would limit impacts to vegetation from unauthorized cross-country vehicle travel.

Research and monitoring would improve long-term tracking of vegetative condition within the wilderness areas.

### ***Livestock Grazing***

The designation of the Little Boulder Trail and the Mecca staging area, as well as use in some parts of the Mecca climbing area, may impact cattle movement at these locations by attracting additional recreational visitation to these locations.

Motorized access to grazing facilities within designated wilderness would be impacted by the designation. Use of motorized equipment for access to the Twin Springs grazing development would require prior notification and be limited to maintenance needs subject to approval of the Field Manager.

### ***Archaeological Resources and Historic Properties***

Any surface disturbing activities as part of the implementation of this plan would be evaluated for effects to cultural resources. This would include the 23 motorized access points and 1.75 miles of designated trail.

The two designated trails in the Big Rocks Wilderness would be situated to avoid direct and indirect impacts to known archaeological resources. Bouldering and climbing activities in Big Rocks and the South Pahroc Range Wilderness Areas may lead to impacts to cultural resources. Any impacts to archeological resources would be evaluated, and management actions may be taken as described in the Proposed Action. New foot-worn hiking paths would be evaluated for impacts to archaeological resources and rehabilitated when appropriate.

Rehabilitation of small site disturbances would be designed to avoid impacts to cultural resources. An archaeological inventory would be completed before completing any rehabilitation projects.

The removal of some vegetation from areas surrounding archaeological resources for fire pre-suppression may enhance and protect these resources.

As public information on these areas increases, potential impacts to archaeological sites within these wilderness areas may include direct and indirect damage from increased foot traffic, removal of artifacts, vandalism and illegal excavations.

General interpretive information on wilderness resources, including archaeological resources, would help reduce impacts to archaeological sites. Continuing volunteer site stewardship efforts and increased patrol by law enforcement officers and other BLM staff would help reduce impacts to cultural sites. Regular monitoring of visitor use would trigger mitigation efforts if impacts to archaeological resources are detected.

### ***Recreation***

1.75 miles of trail would be designated in the Big Rocks Wilderness. The majority of the Big Rocks Wilderness and all of the Mount Irish and South Pahroc Range Wilderness Areas would not be accessed by designated trails. Cross-country travel on foot and by horse would not be affected, and the experience of visitors seeking a more primitive and unconfined form of recreation would be enhanced. A monitoring system would be established to prevent or respond to degradation of trails, campsites, solitude, additional foot-worn paths, bouldering opportunities and recreational impacts to other resources.

Bouldering and rock climbing in the Big Rocks Wilderness would have some constraints in place for the protection of natural and cultural resources. These constraints may displace some bouldering and rock climbing activities to alternate locations outside the wilderness.

Geocaching would not be allowed in any of the wilderness areas. Geocaches would be removed when encountered. Visitors wishing to participate in geocaching would be required to find locations outside of the wilderness areas.

### ***Wilderness***

**Untrammelled** – Under Alternative 1 (the Proposed Action), trammeling activities would continue in the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas.

Activities may continue for the management and suppression of wildland fire. Activities may continue in the control of invasive and non-native species. Future wildlife relocation activities and future wildlife water developments may occur under the plan guidelines. Emergency stabilization activities following wildland fires may occur as well. Removal of vegetation surrounding archaeological sites for protection from wildland fire would be a trammeling impact, but would enhance and protect these supplemental values.

Bouldering activities would have a trammeling impact in the Mecca climbing area. Chalk, used by climbers to dry their hands and increase friction, would be left on the boulders where they have been climbed. Camping may cause a trammeling impact in all three wilderness areas where campfire rings are left by site users.



*Effects of Chalk Use from Bouldering in Mecca*

The approved use of motorized equipment for access to the Twin Springs grazing development and rehabilitation activities on small site disturbances would have trammeling effects in the short term.

**Naturalness and primeval character** – The naturalness and primeval character of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would remain mostly intact. Non-native plants, such as cheatgrass, would continue in portions of all three wilderness areas, but most noxious weeds would be removed to restore and preserve the natural character of the wilderness areas. Actions may be taken in fire management to prevent further unnatural conversion of vegetative communities to non-native annual grasslands.

**Undeveloped** – Five range developments in the South Pahroc Range Wilderness and two range developments in the Big Rocks Wilderness would remain in use for livestock grazing. Range developments in these wilderness areas would not be removed except with agreement between the permittee and the BLM. Maintaining the existing developments would have minimal impacts to the undeveloped nature of the Big Rocks and South Pahroc Range. In addition, the existing two-track route that accesses the Twin Springs range development would remain and would impact the undeveloped character of

the South Pahroc Range Wilderness. In the Big Rocks Wilderness, three miles of trail would be designated and maintained; in the South Pahroc Wilderness, 3.8 miles of trail would be reclaimed; in the Mount Irish Wilderness, 3.5 miles of trail would be reclaimed. In the South Pahroc Range Wilderness, the long-term seismic monitoring station would remain.

Removal of personal property not associated with legitimate campsites or less than 50 years old would enhance the undeveloped character of all three areas.

**Outstanding opportunities for solitude or a primitive and unconfined form of recreation** – Visitor encounters in the Mecca area of the Big Rocks Wilderness would regularly occur. Visitor encounters in the rest of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would be infrequent. No additional regulations would be put in place to confine or restrict recreational activities. Management actions that confine use may be implemented if visitor use and encounters increase.

Outstanding opportunities for navigating and traversing difficult terrain would remain throughout all three areas.

#### ***Riparian or Wetlands***

Actions to remove or control tamarisk in springs around the South Pahroc Range Wilderness would enhance riparian areas. Rerouting the Little Boulder Trail in the Big Rocks Wilderness to avoid Little Boulder Spring would enhance riparian conditions.

#### ***Wildlife and Migratory Birds***

No known important wildlife use areas occur in the three wilderness areas. The rehabilitation of 3.5 miles of trail in the Mount Irish Wilderness and 3.8 miles of trail in South Pahroc Range Wilderness would enhance wildlife habitat along those narrow corridors. Ground-disturbing rehabilitation actions may have impacts on individual animals in the area of disturbance. Individual animals may be displaced while rehabilitation goes on; actions would take a maximum of two days. The designation of two trails over 1.75 miles in the Big Rocks Wilderness may result in impacts to individual animals from increased visitor use along those corridors. Other ground-disturbing actions include development of vehicle pullouts and turn-around points which may result in impacts to individual burrowing animals.

The 0.75-mile reroute of the Little Boulder Trail in the Big Rocks Wilderness to avoid Little Boulder Spring would reduce impacts to wildlife as they seek water at the spring. There would be no other new trail construction.

The designation of the Mecca staging area and the use of the Mecca climbing area may impact movement of individual animals in those specific areas by attracting and focusing visitor use to those points.

Informal foot-worn paths that occur in all three wilderness areas may be rehabilitated or modified if they are determined to have a negative impact on wildlife.

### ***Special Status Species***

The 0.75-mile reroute of the Little Boulder Trail to avoid Little Boulder Spring, as well as removal of campsites closer than 300 feet to any spring would enhance opportunities for special status species such as bats and desert bighorn sheep to utilize these natural water sources.

Maintenance of designated trails in the Big Rocks Wilderness may result in the temporary displacement of desert bighorn sheep. Maintenance and repairs would only take one to two days to complete and would not result in long-term impacts to bighorn behavior. Increased visitor use associated with bouldering activities in the Mecca climbing area may also impact movement of desert bighorn sheep within that specific area.

### ***Fire Management***

Minimum Impact Suppression Techniques (MIST) would limit the use of motorized vehicles and equipment as well as certain suppression techniques that may impact wilderness characteristics. The use of motorized equipment and other techniques may be approved when necessary to stop any large-scale conversion of native vegetation communities to invasive annual grasslands. The use of aerial suppression techniques such as retardants would create a short-term impact to visual resources within the wilderness areas, but would reduce surface impacts from ground-disturbing suppression activities such as line construction.

Where appropriate, in the higher elevation, pinyon-juniper woodlands of all three areas, wildland fire may be managed to play a more natural role in the ecosystem.

## **Alternative 2 (Human Activity Most Evident)**

### ***Noxious and Invasive Weeds***

Weed introduction along designated trails in all three wilderness areas is likely to be greater under Alternative 2 than the Proposed Action. Weed treatment would occur on a case-by-case basis according to the District Noxious Weed Plan. Weed treatment procedures in the wilderness setting are clearly defined and compatible with limiting noxious weeds.

The continued presence and anticipated increase of recreational activities in the three wilderness areas, including camping, hiking, bouldering and horse packing, may contribute to the spread of invasive and non-native species as a result of trampling of native species and the possibility of carrying invasive and non-native seeds into the wilderness areas. The continued presence of livestock in the wilderness areas may also contribute to the spread of invasive and non-native species through trampling of vegetation and seed dispersal.

### ***Vegetation***

Alternative 2 would leave 10.3 miles of existing trails open for non-motorized use in the three wilderness areas. Additional new trails may be designated in the future to meet growing demands. This increased number of designated trails over the other alternatives may result in additional impacts to native vegetation along trail corridors. Further, redundant campsites would not be rehabilitated, which would result in greater impacts to vegetation than in Alternative 1 (the Proposed Action).

The continued use of the Big Rocks Wilderness for bouldering would result in informal foot-worn paths connecting and surrounding boulders used for climbing. Additionally, the use of crash pads for safety in bouldering landing zones would lead to the disturbance of vegetation around boulders, known as pad halos.

Vehicle turn-around areas would be constructed at motorized access points outside all three wilderness areas. Turn-around construction would result in the disturbance of no more than one acre per turn-around. This would result in five acres of disturbance at the Big Rocks Wilderness, eight acres of disturbance at the Mount Irish Wilderness and ten acres of disturbance at the South Pahroc Range Wilderness. This would also focus impacts to these 23 sites and limit new impacts from occurring at other locations. In addition, vehicle barriers would be constructed outside of wilderness to prevent vehicles from cross-country travel inside the wilderness.

Research and monitoring would improve long-term tracking of vegetative condition within the wilderness areas.

### ***Livestock Grazing***

The designation of 8.25 miles of trail in the three wilderness areas may result in greater disturbance to movement of livestock than the proposed action by attracting additional



recreational visitation to these locations. The designation of the Mecca staging area and use in some parts of the Mecca climbing area may similarly impact livestock.

Motorized access to grazing facilities within designated wilderness would be impacted by the designation. Use of motorized equipment for access to the Twin Springs grazing development would require prior notification and be limited to major maintenance needs subject to approval of the Field Manager.

### ***Archaeological Resources and Historic Properties***

Any surface-disturbing activities as part of the implementation of this plan would be evaluated for effects to cultural resources. This would include the 23 motorized access points.

Designated trails in the three wilderness areas would be situated to avoid direct and indirect impacts to known archaeological resources. Bouldering and climbing activities in the Big Rocks and the South Pahroc Range Wilderness Areas would be evaluated for effects to archaeological resources, and management actions may be taken. New foot-worn hiking paths would be evaluated for impacts to archaeological resources and rehabilitated when appropriate. The additional trails designated under this alternative may attract greater visitor use than the Proposed Action and may result in impacts to archaeological resources, including direct and indirect damage from increased foot traffic, removal of artifacts, vandalism and illegal excavations.

Rehabilitation of small site disturbances would be designed to avoid impacts to cultural resources. An archaeological inventory would be completed before completing any rehabilitation projects. If archaeological resources are present, the rehabilitation proposal may not be implemented, or the sites would be mitigated after consultation with the Nevada State Historic Preservation Office (SHPO) and the development of a treatment plan.

General interpretive information on wilderness resources, including archaeological resources, would help reduce impacts to cultural sites, as would continuing volunteer site stewardship efforts. Increased patrol by law enforcement officers and other BLM staff on designated trails, near spring sources, at known archaeological sites and along the perimeter of all three wilderness areas would also help reduce impacts to cultural sites. Regular monitoring of visitor use would trigger mitigation efforts if impacts to cultural resources are detected.

### ***Recreation***

Three miles of trail would be designated in the Big Rocks Wilderness, 3.5 miles of trail would be designated in the Mount Irish Wilderness and 3.8 miles of trail would be designated in the South Pahroc Range Wilderness. Alternative 2 designates the most existing trails and would provide the most visitor support by making information available through maps, interpretive kiosks and signing. The additional trail designations may result in fewer opportunities for primitive and unconfined forms of recreation.

The majority of the three wilderness areas would not be accessed by trails. This would enhance opportunities for primitive and unconfined recreation. Cross-country travel on foot and by horse would be the main form of access into the heart of all three wilderness areas.

A monitoring system would be established to prevent or respond to degradation of trails, campsites, solitude, additional foot-worn paths, bouldering opportunities and recreational impacts to other resources.

No management of visitor use encounters would occur under Alternative 2. The increased number of designated trails may result in visitor encounters greater than the Proposed Action. There would be no limitations confining recreational use in the three areas.

All forms of outfitters and guides services would be permitted after subsequent site-specific NEPA analysis was completed. An increase in commercially-guided activities within the three wilderness areas, such as heritage tourism, may result in an increase in informal foot-worn hiking paths, campfire impacts and increased visitor encounters.

Casual geocaching would be allowed after subsequent site-specific analysis was completed. Geocaching – both physical geocaches permitted after site-specific NEPA analysis was completed and virtual geocaches which would not require additional NEPA analysis – may result in increased foot-worn hiking paths and increased visitor encounters within the three wilderness areas.

### ***Wilderness***

**Untrammelled** – Under Alternative 2, trammeling activities would continue in the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas. Activities may continue for the management and suppression of wildland fire. Activities may continue in the control of invasive and non-native species. Future wildlife relocation activities and future wildlife water developments may occur under the plan guidelines. Emergency stabilization activities following wildland fires may occur as well.

Bouldering activities would have a trammeling impact in the Mecca climbing area. Chalk, used by climbers to dry their hands and increase friction, would be left on the boulders where they have been climbed. Camping may cause a trammeling impact in all three wilderness areas where campfire rings are left by site users.

The approved use of motorized equipment for access to the Twin Springs grazing development and rehabilitation activities on small site disturbances would have trammeling effects in the short term.

**Naturalness and primeval character** – The naturalness and primeval character of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would remain mostly intact. Non-native plants such as cheatgrass would continue in portions of all three wilderness areas, but most noxious weeds would be removed to restore and preserve the

natural character of the wilderness areas. Actions may be taken in fire management to prevent further unnatural conversion of vegetative communities to non-native annual grasslands.

**Undeveloped** – Five range developments in the South Pahroc Range Wilderness and two range developments in the Big Rocks Wilderness would remain in use for livestock grazing. Range developments in these wilderness areas would not be removed except with agreement by the permittee and the BLM.

In the Big Rocks Wilderness, three miles of trail would be designated and maintained; in the South Pahroc Range Wilderness, 3.8 miles of trail would be designated and maintained; in the Mount Irish Wilderness, 3.5 miles of trail would be designated and maintained. New trails may be developed and designated under Alternative 2 to meet future demands. The presence of these trails and the associated directional signs would impact the undeveloped character of the Big Rocks Wilderness.

In the South Pahroc Range Wilderness, the long-term seismic monitoring station would remain. The presence of this valid existing development would impact the undeveloped character of the wilderness area.

In all three areas, personal property, unauthorized structures or installations would be removed as encountered as long as they are not historically significant. Geocaches would be allowed after completing site-specific analysis for each geocache. Removal of personal property, unauthorized structures or installations would enhance the undeveloped quality of these areas. The presence of physical geocaches would impact the undeveloped quality of these areas. The presence of virtual geocaches would have impacts to the undeveloped character by increasing the potential for foot-worn hiking paths to occur in the three areas.

**Outstanding opportunities for solitude or a primitive and unconfined form of recreation** – Visitor encounters in the Mecca area of the Big Rocks Wilderness would regularly occur. Visitor encounters in the rest of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would be infrequent. No additional regulations would be put in place to confine or restrict recreational activities. The increase in trail designations over the Proposed Action would result in increased visitor encounters and impacts to solitude.

Outstanding opportunities for navigating and traversing difficult terrain would remain throughout all three areas.

Having fewer regulations and potential management actions in place than the Proposed Action would enhance opportunities for a more unconfined, unregulated experience.

### ***Riparian or Wetlands***

Actions to remove or control tamarisk in springs around the South Pahroc Range Wilderness would enhance riparian areas. Rerouting the Little Boulder Trail in the Big Rocks Wilderness to avoid Little Boulder Spring would enhance riparian conditions.

### ***Wildlife and Migratory Birds***

No important wildlife use areas have been identified in these three areas. The designation of 3.5 miles of trail in the Mount Irish Wilderness, 3.8 miles of trail in the South Pahroc Range Wilderness and three miles in the Big Rocks Wilderness may result in impacts to individual animals from increased visitor use along those corridors. Other ground-disturbing actions include development of vehicle pullouts and turn-around points which may result in impacts to individual burrowing animals. The designation of the Mecca staging area and the use of the Mecca climbing area may also impact movement of individual animals in those specific areas by attracting and focusing visitor use to those points.

The 0.75-mile reroute of the Little Boulder Trail in the Big Rocks Wilderness to avoid Little Boulder Spring would reduce impacts to wildlife as they seek water at the spring.

Informal foot-worn paths that occur in all three wilderness areas may be rehabilitated or modified if they are determined to have unacceptable impacts on wildlife.

### ***Special Status Species***

The 0.75-mile reroute of the Little Boulder Trail to avoid Little Boulder Spring would enhance opportunities for special status species such as bats and desert bighorn sheep to utilize the spring.

Maintenance of designated trails in the three wilderness areas may result in the temporary displacement of desert bighorn sheep. Maintenance and repairs would only take one to two days to complete and would not result in long-term impacts to bighorn behavior. Increased visitor use associated with bouldering activities in the Mecca climbing area may also impact movement of desert bighorn sheep within that area.

### ***Fire Management***

Minimum Impact Suppression Techniques (MIST) would limit the use of motorized vehicles and equipment as well as certain suppression techniques that may impact wilderness characteristics. The use of motorized equipment and other techniques may be approved when necessary to stop any large-scale conversion of native vegetation communities to invasive annual grasslands. The use of aerial suppression techniques such as retardants would create a short-term impact to visual resources within the wilderness areas, but would reduce surface impacts from ground-disturbing suppression activities such as line construction.

Where appropriate, in the higher elevation, pinyon-juniper woodlands of all three areas, wildland fire may be managed and allowed to play a more natural role in the ecosystem.

## **Alternative 3 (No Action)**

### ***Noxious and Invasive Weeds***

Weed introduction along existing, undesignated trails in all three wilderness areas is likely to occur. Weed treatment would occur on a case-by-case basis according to the District Noxious Weed Plan. Weed treatment procedures in the wilderness setting are not clearly defined in the No Action Alternative and would require further NEPA analysis.

The continued presence and anticipated increase of recreational activities in the three wilderness areas, including camping, hiking, bouldering and horse packing, may contribute to the spread of invasive and non-native species as a result of trampling of native species and the possibility of carrying invasive and non-native seeds into the wilderness areas. The continued presence of livestock in the wilderness areas may also contribute to the spread of invasive and non-native species through trampling of vegetation and seed dispersal.

### ***Vegetation***

Under the No Action Alternative, rehabilitation of small site disturbances would be restricted. Continued recreational use of the wilderness areas would result in continuing impacts to vegetation on foot-worn paths, at campsites and between and around boulders where climbing activity occurs. Limited improvements and barriers to restrict unauthorized vehicle access would result in continuing impacts to vegetation from illegal motorized use of existing trails. A lack of designated, clearly-defined access points may result in greater impacts to vegetation occurring than the Proposed Action.

### ***Livestock Grazing***

Grazing would continue within the three wilderness areas under the Mojave – Southern Great Basin Resource Advisory Council Standards and Guidelines. All existing range developments within the wilderness areas would be kept and maintained. Continued recreational use of the wilderness areas may impact the movement of cattle.

### ***Archaeological Resources and Historic Properties***

Potential impacts to archaeological sites within these wilderness areas would include direct and indirect damage from increased foot traffic, removal of artifacts, vandalism and illegal excavations. The No Action Alternative would do nothing to direct visitation and avoid potential impacts to archaeological sites.

### ***Recreation***

There would be no designated trails under the No Action Alternative. 8.25 miles of existing routes would be left open as foot-worn paths. This would not affect opportunities for cross-country hiking or horse packing within the areas.

All forms of outfitters and guide services would be permitted after subsequent site-specific NEPA analysis was completed. The potential for more commercially-guided activities in the wilderness areas may result in fewer opportunities for solitude and unconfined recreation than the Proposed Action.

There would be fewer limitations confining recreational use in the three areas than the Proposed Action. No additional restrictions would be placed on bouldering or rock climbing activities. This would enhance the unconfined, unregulated experience over the Proposed Action. Geocaching would not be allowed in any of the wilderness areas. Geocaches would be removed when encountered. Individual wishing to geocache would be displaced to locations outside the wilderness.

### ***Wilderness***

**Untrammelled** – Under the No Action Alternative, no new actions are proposed that would trammel the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas. Current management activities that may continue include the management and suppression of wildland fire. New trammeling activities would be considered on a case-by-case basis.

**Naturalness and primeval character** – The naturalness and primeval character of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would remain mostly intact. Non-native plants such as cheatgrass would continue in portions of all three wilderness areas. Actions may be taken in fire management to prevent further unnatural conversion of vegetative communities to non-native annual grasslands.

**Undeveloped** – Five range developments in the South Pahroc Range Wilderness and two range developments in the Big Rocks Wilderness would remain in use for livestock grazing. No range developments in these wilderness areas would be removed.

In the South Pahroc Range Wilderness, the long-term seismic monitoring station would remain.

The presence of these authorized developments would have an impact to the undeveloped quality of the South Pahroc Range and Big Rocks Wilderness Areas.

In all three areas, personal property, unauthorized structures or installations would be removed as encountered as long as they are not historically significant. Removal of these items would maintain the existing undeveloped quality of all three areas.

**Outstanding opportunities for solitude or a primitive and unconfined form of recreation** – Visitor encounters in the Mecca area of the Big Rocks Wilderness would regularly occur. Visitor encounters in the rest of the Big Rocks, Mount Irish and South Pahroc Range Wilderness Areas would be infrequent. No additional regulations would be put in place to confine or restrict recreational activities. Management actions confining use may be implemented if visitor use and encounters increase.

Under the No Action Alternative, there would less public information available on these three areas. This may result in greater opportunities for solitude than the other action alternatives.

Outstanding opportunities for navigating and traversing difficult terrain would remain throughout all three areas.

### ***Wildlife, Migratory Birds and Special Status Species***

Actions may be authorized to support healthy, viable and naturally-distributed wildlife populations under the Memorandum of Understanding between the BLM and the NDOW (BLM MOU 6300-NV930-0402). Any actions authorized to support healthy, viable and naturally-distributed wildlife populations would have a beneficial impact to wildlife.

Under the No Action Alternative, there would be less management activity and education, which may lead to increased disturbance of wildlife and wildlife habitat by visitors.

### ***Fire Management***

Minimum Impact Suppression Techniques (MIST) would limit the use of motorized vehicles and equipment as well as certain suppression techniques that may impact wilderness characteristics. The use of motorized equipment and other techniques may be approved when necessary to stop any large-scale conversion of native vegetation communities to invasive annual grasslands, or unless necessary for the protection of human life or private property. The use of aerial suppression techniques such as retardants would create a short-term impact to visual resources within the wilderness areas, but would reduce surface impacts from ground-disturbing suppression activities such as line construction.

Where appropriate, in the higher elevation, pinyon-juniper woodlands of all three areas, wildland fire may be managed and allowed to play a more natural role in the ecosystem.

## **Cumulative Impacts**

According to the 1994 BLM Handbook Guidelines for Assessing and Documenting Cumulative Impacts, the cumulative analysis should be limited to those issues and resource values identified during scoping that are of major importance. Issues of major importance identified during internal and external scoping include:

- Opportunities for solitude and primitive, unconfined recreation
- Protecting and enhancing the undeveloped and natural appearance of the wilderness areas
- Preserving naturalness, primeval character and influence of the wilderness areas
- Management of special non-wilderness land uses allowed by the Wilderness Act

The cumulative impacts are common to all alternatives. A general discussion of past, present and reasonably foreseeable future actions follows:



### ***Past Actions***

These three wilderness areas were designated in November of 2004. Prior to designation, opportunities for solitude and primitive, unconfined recreation were outstanding.

Developments were limited to those seven range developments authorized for livestock use and a long-term seismic monitoring station in the South Pahroc Range Wilderness.

There were 10.5 miles of unauthorized vehicle routes across all three areas.

Approximately 2.25 miles of routes have been actively reclaimed. There are large portions of the three areas that have become infested with the annual invasive cheatgrass.

Livestock grazing has been an authorized acceptable use. Only one of the three areas was managed under the Interim Management Policy for Lands under Wilderness Review, the South Pahroc Range Wilderness Study Area. The Big Rocks and Mount Irish Wilderness Areas were citizen-proposed areas not managed as Wilderness Study Areas by the BLM.

### ***Present Actions***

Current actions include increased educational programs on wilderness and Leave No Trace principles, increased signing efforts, as well as BLM staff and volunteer monitoring patrols. There has been a small increase in public interest in these wilderness areas for their recreational opportunities.

### ***Reasonably Foreseeable Future Actions***

The population of southern Nevada continues to grow and expand. Residential developments are expected in Coyote Springs, an area in Lincoln and Clark counties that is within 50 miles of the three wilderness areas. It is expected that opportunities for solitude in these three areas would diminish in the future as the result of increased population growth. Other anticipated results of population growth and subsequent increased use of these wilderness areas include increased impacts to vegetation, wildlife and cultural resources, as well as the possibility that more cultural resources may be discovered. It is expected that the invasive annual cheatgrass would continue to expand within these wilderness areas. It is expected that wildland fire would continue to require some trammeling management actions to prevent excessive spread of cheatgrass.

Livestock grazing would also continue to be an authorized use in these wilderness areas, and maintenance of the existing seven range developments would be required over time. No new range developments are likely to be authorized.

### ***Conclusion***

***The cumulative impacts of a wilderness management plan for these areas when considered in combination with past, present and reasonably foreseeable future actions would result in the maintenance of wilderness qualities with minimal user regulations.***

## **Mitigating Measures**

Mitigating measures incorporated into the proposed action are sufficient, based on the analysis of environmental consequences no additional mitigation is proposed.

## **Monitoring**

The monitoring section tracks the outcome of those proposed activities on four qualities of wilderness character, not just the quality of wilderness the activity was primarily intended to address.

Wilderness character encompasses a combination of elements as described by four principle qualities defined in the Wilderness Act. The combination of these qualities distinguish wilderness from all other lands. These four qualities are of equal importance to one another and are defined as:

- Untrammeled – wilderness is unhindered and free from modern human control or manipulation.
- Outstanding opportunities for solitude or a primitive and unconfined type of recreation – wilderness provides opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge.
- Undeveloped – wilderness is substantially without permanent developments or modern human occupation.
- Natural – wilderness ecological systems, being affected primarily by the forces of nature, retain their primeval character and influence substantially free from the effects of modern human civilization.

A single activity is likely to have an effect on several qualities of wilderness character, even though the purpose of the activity is to affect only one quality. A single activity may improve one quality of wilderness character while diminishing another. For example, an activity such as weed control, which is intended to restore natural conditions over the long term, may diminish the untrammeled condition of the wilderness in the short term. These two separate outcomes, the effectiveness on improving “natural” and the side effect of diminishing “untrammeled,” will be monitored separately.

Since activities may affect several qualities, separate activities undertaken for different purposes may cumulatively diminish one of the same qualities of wilderness character. For example, a trail might be designated to control visitor impacts on vegetation. In the same vicinity, a fence or barrier may be in place to protect sensitive resources from recreational impacts. Though the two activities are unrelated, both activities have an effect on the “undeveloped” quality of wilderness character. Monitoring the effects of

single activities to multiple qualities of wilderness character would improve our understanding of wilderness character, in combination and over time.

Effects of intentional, unintentional and unauthorized activities would all be captured under the monitoring system. The monitoring program will provide a greater understanding of the overall and specific condition of each wilderness area. Information generated in monitoring wilderness condition would indicate: 1) the current state of wilderness character; 2) how wilderness character is changing over time; 3) how stewardship actions are affecting wilderness character; and 4) what stewardship priorities and decisions would best preserve and sustain wilderness character. Monitoring would also provide Wilderness Managers with more complete information which would improve the evaluation of future proposed activities.

The following monitoring would assist the BLM in tracking and improving the untrammelled condition of the wilderness areas:

- A log of all annual management and other activities that control or manipulate flora, fauna, soils, water or natural disturbance factors present in the wilderness would be maintained in each area's permanent wilderness file. A description, location, purpose, and expected outcome of each activity would be documented. Activities that may be tracked include:
  - Rehabilitation projects
  - Fire suppression activities
  - Emergency Stabilization and Rehabilitation activities
  - Treatments of noxious or invasive vegetation
  - Wildlife management activities
  - Periods of livestock grazing

The following monitoring would assist the BLM in preserving the outstanding opportunities for solitude or a primitive and unconfined type of recreation:

- A log of sights and sounds of civilization would be maintained in each area's permanent wilderness file. A description and location of the activity inside or outside the wilderness areas would be documented.
- A log of all regulations or restrictions occurring in the wilderness areas would be maintained in each area's permanent wilderness file. A description of the regulation and its purpose would be documented.
- Visitor use encounters on designated trails and in the Mecca area of the Big Rocks Wilderness would be monitored through one or more of the following methods:
  - Visitor sign-in and comment forms at trailheads and access points
  - Public comment received by mail or by e-mail
  - Automated visitor counters may be located at trailheads or access points

- Wilderness Rangers or volunteer stewards would visit trailheads, access points and the Mecca area at least once every two months to record the number of vehicles and collect written comments or other trail data
- Wilderness Rangers or volunteer stewards would hike each trail at least twice a year to record the number of encounters and trail conditions. Trail conditions would be recorded using a Global Positioning System (GPS) and photos would be taken as needed
- The wilderness areas would be monitored at boundary roads and access points at least once every two months by Wilderness Rangers, Law Enforcement Rangers or volunteer stewards to detect any unauthorized uses. Over-flight monitoring may be used to assist in detecting unauthorized uses as well.
- Campsites would be recorded by the Wilderness Ranger to assure compliance with plan standards. Campsites would be recorded by GPS and photos taken to track long-term trends.
- Mecca would be monitored at least once every two months by Wilderness Rangers, Law Enforcement Rangers or volunteer stewards for foot-worn hiking trails, impacts to cultural resources and unauthorized methods such as chipping or gluing.

The following monitoring would assist the BLM to track and, where possible, improve the undeveloped and natural appearance of the wilderness:

- A log of all the developments, structures and facilities present in the wilderness areas would be maintained in each area's permanent wilderness file. A description, location, purpose and expected outcome of the feature would be documented.
- All former vehicle routes that are rehabilitated would be checked in the field at least twice a year to assure they are not continuing to receive motorized use. If unauthorized vehicle use continues, modifications as described in the plan would be made to the closure.

The following monitoring would assist the BLM in preserving the naturalness and primeval character and influence of the wilderness:

- A log of all known human alterations to the ecosystem would be maintained in each area's permanent wilderness file. A description and location would be documented or referenced. Conditions that may be tracked include:
  - Non-native species
  - Threatened, endangered and sensitive species
  - Species no longer present in the wilderness
  - Air quality
  - Presence, abundance and distribution of native species

- A log of natural disturbances would be maintained in each area's permanent wilderness file. A description and location would be documented or referenced. Activities that may be tracked include:
  - Fire
  - Flood
  - Insect or disease outbreaks
- Monitoring for noxious weeds would occur at least once a year, especially focused at springs, on trails or in washes receiving regular visitor use.
- Wildlife monitoring would be accomplished primarily by the Nevada Department of Wildlife according to the agency's established protocol. The BLM Wilderness Rangers would also record wildlife sightings, especially for nesting raptors, bighorn sheep and mule deer. Monitoring or research by other entities may occur according to protocol described in the plan.
- Vegetation monitoring for livestock utilization would be done. Standards for protection of rangeland resources are identified in the Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration in the BLM's Grazing Regulations. On BLM lands in southern Nevada, the area-specific standards and guidelines are set in the Mojave – Southern Great Basin Standards and Guidelines. Monitoring for cattle presence would be incorporated into all other monitoring tasks.
- Findings, or a reference to the findings, from inventory, monitoring and research projects completed in the wilderness areas would be included in each area's wilderness file. Other known research outside the wilderness but applicable to the understanding of the wilderness ecosystem may be referenced.
- Monitoring to assess the effects of recreation on wildlife would occur where feasible monitoring methods are developed to track recreation-caused changes in wildlife use patterns within the three wilderness areas.
- Monitoring would be included to account for changes to the natural fire cycle occurring from introduced annual grasses. This additional monitoring would aid fire management in determining Appropriate Management Response on an annual basis. For fires having greater potential to convert native vegetation to unnatural annual grass-dominated vegetation, fire management would have better information to adjust response to the most active suppression response compatible with the fire management objectives and procedures for the area.

## **Consultation and Coordination**

### **Intensity of Public Interest and Record of Contacts**

The public will be notified on the BLM website when the Environmental Assessment is completed, Decision Record /Finding Of No Significant Impact signed and 45-day appeal period initiated.

The Ely Field Office mails a Consultation, Cooperation and Coordination Letter to individuals and organizations that have expressed an interest in recreation/wilderness related actions. Those receiving the Consultation, Cooperation and Coordination Letter have the opportunity to request from the Ely Field Office more information regarding specific actions. Those requesting notification of recreation/wilderness actions are requested to respond if they want a copy of the final Environmental Assessment and signed Decision Record/Finding of No Significant Impact. Two written responses and a verbal response were received during the 60-day comment period.

The Lincoln County Coordinated Resource Management Steering Committee established a Technical Review Team to provide scoping comments and review of the Wilderness Management Plan. The Technical Review Team met three times between September of 2005 and July of 2006 and provided input into issues and management direction.

The Proposed Wilderness Management Plan was presented at a Tribal Coordination Meeting in the Ely BLM Field Office on November 17, 2005. No comments or concerns were raised.

### **List of Preparers**

#### **BLM employees who formed the interdisciplinary team preparing and reviewing this plan:**

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#### **BLM employees who provided periodic contributions or expertise:**

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Lincoln County Commission  
Lincoln County Coordinated Resource Management Steering Committee

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## GLOSSARY

**Archaeological Resource.** Any material remains of past human life or activities which are of archaeological interest.

**Bouldering.** The term given to climbing that concentrates on short, sequential moves on rock usually no more than 15 feet off the ground.

**Cherry-stem.** A dead-end road or feature that forms a portion of a Wilderness boundary and that remains outside the Wilderness.

**Chipping.** The process of creating or enhancing holds in rock for the purpose of bouldering.

**Gluings.** The practice of reinforcing the stability or strength of loose rock holds with some type of epoxy for the purpose of bouldering.

**Invasive.** Describes a species which takes over a new habitat where it was not previously found, often to the detriment of species which were there before.

**Minimum Requirement.** The concept of minimum requirement comes from Section 4 (c) of the Wilderness Act of 1964. *“Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act...”*

**Noxious Weed.** Any plant designated by a federal, state, or county government as injurious to public health, agriculture, recreation, wildlife, or property.

**Perennial.** Active throughout the year, or living for many years, such as a perennial plant.

**Permion® Finish.** Product name for an Ultra Violet-cured urethane topcoat with aluminum and mineral oxide additives incorporated in the urethane. Permion may be used to conceal disturbances to desert varnish.

**Threatened Species.** Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range; listings are published in the Federal Register.

**Untrammelled.** Not limited or restricted; unrestrained.